

**INSTITUTIONAL PROJECT OF INTERNATIONALISATION
APPLICATION SUBMITTED TO THE
CAPES CALL 041/2017**



**OFFICE OF THE PRO VICE-CHANCELLOR OF POSTGRADUATE EDUCATION
UNIVERSIDADE FEDERAL DE MINAS GERAIS
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1. MISSION

The mission of Universidade Federal de Minas Gerais (UFMG) is to offer public education, research and extra-mural activities of quality and relevance; three pillars which are seen as inseparable from each other, ensuring respect for diversity, training socially responsible citizens from basic to postgraduate education and empowering them to be active in all domains of knowledge. The freedom of expression of thought and the free production and dissemination of knowledge are UFMG statutory commitments and form an integral part of this almost centenarian institution.

2. DIAGNOSIS

2.1. Strong Points

2.1.1. Existence of five centres for specialised studies

In 2013, UFMG set up five centres for specialised studies: the Centre for African Studies (CEA), the Centre for East-Asian Studies (CEAO), the Centre for European Studies (CEE), the Centre for Indian Studies (CEI), and the Centre for Latin-American Studies (CELA). Resolution 05/2016 of the Council for Education, Research and Extra-Mural Affairs (CEPE) restructured these five centres, specifying their attributions and the scope of their actions. This is a pioneering initiative in the Brazilian scenario that allows the development of transversal activities between academic units and also between Postgraduate Programmes. The centres for specialised studies bring to the internal culture of UFMG, as well as to the geopolitical spaces that are objects of interest of these centres, the possibility of opening new avenues and novel ways for the production of knowledge.

2.1.2. Cooperation agreements with more than 500 foreign institutions

Currently, UFMG has more than 500 cooperation agreements with renowned institutions of higher education worldwide. These agreements include letters of intent, memorandums of understanding (MoU), research agreements, exchange agreements and individual agreements for cotutele (double degree) at PhD level. More recently, UFMG has started signing cotutele agreements of a broader scope. In this new type of agreement, the double degree procedures at PhD level (cotutele) are no longer enforced by individual instruments but rather have an institutional character that allows participation of multiple individuals. This new type of agreement tends to increase in numbers as a result of institutional initiatives stemming from the institutional project of internationalisation. Another recent legal instrument in force at UFMG are agreements of key strategic international partnerships through which UFMG and selected partner universities commit themselves to supporting institutional actions of internationalisation with a strategic focus.

2.1.3. Set of graduate programs with a profile of excellence

Currently, UFMG has 86 Postgraduate Programmes, including Academic Master's and Doctoral degrees as well as Professional Master's degrees. 54 PhD courses offered by UFMG were ranked at top levels in the last CAPES four-year evaluation. 16 PhD courses scored grade 7, the highest possible grade, accounting for 20% of the total number of PhD courses offered at the institution; 18 PhD courses scored grade 6, corresponding to 22.5% of the total number of PhD courses; 20 PhD courses scored grade 5, equivalent to 25% of the total number of PhD courses. Together, the PhD courses with grades 5, 6 and 7 account for 67.5% of the total number of PhD courses in the Institution. These numbers place UFMG at an outstanding position among Brazilian institutions of higher education. Additionally, PhD courses with grades 5, 6 and 7 are found in all major areas of knowledge at UFMG, ensuring that levels of excellence are not only numerous but also span across the academic spectrum. Altogether, the average grade of all PhD courses at UFMG is 5.2, a grade that is at the top of the country's higher education institutions with more than 50 Postgraduate Programmes. This is a strong point that unequivocally demonstrates the scope, excellence and potential of the UFMG process of internationalisation.

2.1.4. Institutional policy of major internationalization

The UFMG stands out in the national context for having an institutional policy of internationalization of greater scope. This policy has been built over the last 20 years. In 2002, the Office of International Relations was created, with the status of a Pro Vice-Chancellor's Office. Around the same time UFMG created a Committee for Internationalisation. During the past four administrations as well as in the current Administration, UFMG has made a firm commitment to anchoring internationalisation institutionally and assuring that actions have internal capillarity among all segments of the Institution. Recently, the Council for Education, Research and Extra-Mural Affairs (CEPE) approved Resolution 06/2018 instituting UFMG's Internationalization Policy. Through this resolution, the Committee for International Policies was created with the attribution of monitoring the implementation of the Institution's Strategic Plan for Internationalisation, also approved by CEPE, which runs from April 2018 to March 2023. All these institutional decisions ensure stability in the construction of a robust, vigorous and large-scale process of internationalisation at UFMG.

2.1.5. Own international mobility programme (Minas Mundi)

UFMG maintains its own international mobility programme for undergraduate students known as Minas Mundi Programme. This programme gathers all exchange placements with partner universities under a common umbrella and carries out an annual selection process for the allocation of these placements. This selection process is run on an online platform

from the submission of applications to the final allocation of exchanges. The operational management of the exchange programme and the monitoring of all exchanges are carried out through an online system. This initiative certainly contributes to enhancing UFMG's visibility in the international scenario. Exchanges are always negotiated on a reciprocal basis, bringing to UFMG foreign students who spend one or two academic semesters at the University. The admission and welcoming of these foreign students are done by the International Admission Section of the International Office, working together with the Exchange Section in the coordination of the Minas Mundi Programme. Together, these two Sections contribute to strengthening the international mobility of UFMG undergraduates, which is recognized nationally and internationally as a far-reaching activity.

2.2. Weak Points

2.2.1. Reputation not very representative in international rankings

The international recognition of UFMG in international rankings is not compatible with the expertise and existing capacity at the Institution. Internally, it is a well-known fact that there is higher expertise at UFMG than the one perceived or reported by international rankings. This is particularly reflected in the indicators of international reputation that do not necessarily reflect the quality of the Institution. It is necessary to plan and implement actions to increase the international visibility of UFMG and, consequently, have a positive impact on the reputation indicators in the international rankings. One of the possible alternatives to achieve that goal may be the increase of academic and scientific activities carried out in a foreign language, particularly in English, as a way of enhancing visibility and international reputation. The recruitment of foreign students and fostering the training of faculty and students in foreign languages can also contribute to increase UFMG's international visibility.

2.2.2. Need for improvement of the proficiency levels in foreign languages among faculty, students and technical-administrative staff

Diagnostic tests conducted in conjunction with the Languages Without Borders Programme (IsF) point out that indicators of foreign language proficiency among faculty, students and technical-administrative staff are well above the national average. However, continued action in terms of capacity building is required to increase these internal indicators. Over the last five years, UFMG has developed a language policy that includes offering free courses in languages for academic purposes, in several foreign languages, to all members of the university community. However, it is necessary to promote these actions even further in order to place UFMG's foreign-language proficiency indicators close to those levels observed in world-class universities worldwide.

2.2.3. Incipient recruitment of foreign students

The recruitment of foreign students is a challenge to be faced by UFMG. Every academic term, the Institution receives around 250 international students at undergraduate level, who come to UFMG in placements negotiated in exchange agreements. They are joined by a smaller number of postgraduate students who are directly enrolled in the respective Postgraduate Programmes. In addition to these semester students, a significant number of international students has been seeking admission to UFMG through other channels, including students entering the University through agreements which are negotiated by the Ministry of International Affairs with selected countries (PEC-G and PEC-PG agreements). Despite all these initiatives, there is still great potential for a significant increase in recruiting international students to UFMG. It is vital to plan and implement actions to increase the presence of international students in the Institution and this is a weak point that UFMG is determined to overcome.

2.2.4. Incipient character of actions of international admission

Despite the relevance that UFMG places in actions towards admitting and hosting international students, the Institution is fully aware of the incipient nature of these actions and the urgent need to expand them. As a world-class university, UFMG needs to have a strong hosting section with a strong internal capillarity. It is also vital to expand the international admissions section by establishing focal points in all academic units across the university. In terms of actions towards hosting and international admission, UFMG is a well-established and prominent institution in the Brazilian context. However, UFMG can strengthen and further develop hosting and international admissions when compared to the work carried out in renowned institutions abroad. Working visits to foreign universities for participation in capacity-building activities can provide UFMG's administrative staff with the necessary experience to adapt good international practices to the local reality and, by doing this, increase the impact of hosting and international admissions initiatives at home.

2.2.5. Incipient Information Technologies

UFMG has been fully aware of the need to address the challenges posed by information technology. However, the full development of IT infrastructure is still incipient. UFMG has a large Information Technology Office (DTI) and a Computer Centre (CECOM). Together, they develop tools, applications and systems to meet the demands of the Institution. Nevertheless, it is necessary to increase the range of IT in the daily life of the University. There are processes, still developed in paper and spreadsheets, that can have their operational flows optimized by information technologies. This is an important challenge for UFMG's process of internationalisation. The University is determined to face it and find alternatives in the short run to overcome the problem and increase IT capability and infrastructure in the daily life of the University.

2.3. Other relevant information about the level of internationalization of UFMG

Over 90% of UFMG faculty staff members have a PhD degree. A large number of faculty members obtained a full PhD degree abroad while a significant number of other faculty staff members has an international experience with a PhD internship abroad. There is also a fair number of foreigners working in the institution as permanent faculty members. The administrative staff is well qualified and are encouraged to take postgraduate training. The Institution's infrastructure, despite the recent economic problems in the country, is of high quality with well-equipped laboratories and, thus, able to receive international partners for the development of joint research. It is worth noting the construction of Centres for Didactic Activities (CAD) over the past few years. CADs are modern, well-equipped buildings with shared classroom space between different departments and academic units. There is a CAD for the Biological Sciences (CAD 1) and a CAD for the Humanities (CAD 2); CAD 3 for the Hard Sciences and Engineering has just been opened. UFMG also has three halls of residence, the last of which opened in early 2018. Together, these three halls offer almost 1,000 places for students regularly enrolled at UFMG. 50 vacancies in the halls of residence are allocated to international exchange students. Every year, these 50 vacancies, distributed in semester or quarterly periods, allow UFMG to host around 150 international students in the halls of residence. Other strengths in the internationalisation of UFMG are strategic partnerships with selected foreign institutions, support for PhD cotutelle, summer/winter schools in English, and vigorous participation in international networks of institutional collaborations, among other initiatives. All these actions, listed in UFMG's Strategic Plan for Internationalization, provide a set of guidelines that give UFMG a national prominence in the process of internationalisation of higher education in the country.

2.4. Insertion of materials, themes and subjects in foreign language in the postgraduate program curricular structure.

Resolution 02/2017, approved by the Council for Education, Research and Extra-Mural Affairs (CEPE) on July 4, 2017, established the new General Standards for Postgraduate Education (NGPG) that consider internationalisation as an essential component of the postgraduate policy of the institution. The new NGPGs require the compulsory offer of foreign language courses in all postgraduate programs of UFMG. These programs were given a deadline until the beginning of 2018 to adjust their regulations and to include the regular offer of foreign language courses. This process is about to be completed. In addition, cross-cutting themes of a multidisciplinary nature that can be addressed jointly by various PhD programs through activities in a foreign language are being encouraged. The elaboration of didactic materials complementary to these initiatives is also the object of institutional encouragement.

3. GOALS

3.1. Main Goal

The Institutional Project of Internationalization of Universidade Federal de Minas Gerais (UFMG) has its scope and ultimate goal defined by two Resolutions of the Council of Education, Research and Extra-mural Affairs (CEPE), the highest body of the University for academic matters: Resolution 06/2018, dated 3rd April 2018, which established the parameters of UFMG's internationalization policies, and Resolution 02/2017, dated 4th July 2017, which approved the General Standards of Postgraduate Education, establishing that internationalization should be included as one of the principles upon which the Institution's Postgraduate Programmes are to be organized. In a complementary fashion, UFMG's Innovation Policy, approved by CEPE on 14th November 2017, states as its first guideline the need "to structure institutional action in order to create strategic alliances with local, regional, national and international environments that are geared to promoting innovation." Finally, the Strategic Plan for Internationalization, approved by CEPE on 3rd April 2018, defines actions to be implemented and goals to be achieved within a five-year period, from April 2018 to March 2023, and also points to long-term priority actions. Together, these four documents allow internationalization to be characterised as a priority strategic goal for UFMG and create the institutional conditions which are necessary for the implementation of an Institutional Project of Internationalization at UFMG. Aiming at ensuring effective conditions for the development of the Strategic Plan for Internationalization and creating the basis for the implementation of an Institutional Project of Internationalization, the UFMG Office of the Pro Vice-Chancellor created a Working Group, named PrInt/UFMG, in charge of formulating a proposal to be submitted by UFMG to the CAPES Call 041/2017. Concerned with the breadth and representativeness of the initiative, the Working Group included representatives from the four Academic Offices (Education, Postgraduate Education, Research and Extra-Mural Affairs) and the Office of International Affairs, as well as institutional representatives linked to the three major domains of knowledge at UFMG: Health Sciences, Hard and Technological Sciences, and Humanities. As a first step towards the preparation of the proposal for an Institutional Project of Internationalization, the members of the PrInt/UFMG Working Group read all the reports submitted to the CAPES Quadrennial Evaluation (2013-2016) by the Postgraduate Programmes that met the requirements of the CAPES Call 041/2017. Drawing on a database of keywords taken from the specific section dedicated to internationalization in these reports, the PrInt/UFMG Working Group was able to identify four major topics that stood out among the keywords found in all those reports. Thus, it was possible to identify four themes for which UFMG has consolidated expertise and recognised leadership to respond to contemporary and socially relevant challenges, aligned with the eight Millennium Development Goals (MDGs) of the United Nations. These four themes are (1) Sustainability, Risk Management and Governance; (2) New Technologies and Frontiers of Science; (3) Health and Well-Being; (4) Human Rights. Envisaging the design of a proposal with broad levels of

internal capillarity, the 67 Postgraduate Programmes, which met the requirements of the CAPES/PrInt Call, received an invitation from the Office of the Pro Vice-Chancellor for Postgraduate Education requiring a formal manifestation to join the initiative and to choose one or more themes in order to develop research projects within the framework of the CAPES Call 041/2017. 57 Postgraduate Programmes expressed an interest in joining the initiative. The aim of the invitation was to guarantee an equal opportunity to all Postgraduate Programmes which met the requirements to participate in the CAPES Call but also to respect the freedom of those Postgraduate Programmes that preferred not to be involved. Based on the demand received from 57 Postgraduate Programmes, 28 projects, related to the four main themes, were organised as guiding axes of the UFMG Institutional Project of Internationalization. The pioneering and innovative nature of the proposal is highlighted through a matrix with four horizontal themes and 28 vertical projects which share several intersecting points between themes and projects (see <http://www.ufmg.br/prpg/print>). This innovative design resulted in an institutional proposal which has a transversal and transdisciplinary angle and manages to group convergent proposals from 57 Postgraduate Programmes around four major thematic axes without allocating specific space to any Postgraduate Program per se. Additionally, by allowing the thematic grouping of Postgraduate Programmes with disparate grades in the last CAPES Quadrennial Evaluation, the UFMG institutional proposal makes it possible to bring together local research groups in pursuit of convergent objectives and, thus, to leverage Postgraduate Programs with lower grades in the CAPES four-year evaluation by means of effective interactions with Postgraduate Programmes which were awarded grades of international excellence in the same evaluation. In a scale that ranges from 3 to 7, where grades 6 and 7 are considered levels of excellence and internationalization, the average grade of the 27 Postgraduate Programmes that applied to participate in Theme I is 5.9, while the average grade for the 32 Postgraduate Programmes that decided to work on Theme II is 5.7, the average grade for the 36 Postgraduate Programmes that opted for Theme III is 5.8 and the average grade for the 21 Postgraduate Programmes that chose Theme IV is 6.0. In short, the average grade of the 57 Postgraduate Programs linked to the four Themes is 5.8, namely, a grade that is very close to grade 6.0, guaranteeing an average grade of excellence for the clusters of Postgraduate Programmes in each one of the four themes. Regarding the distribution of financial resources, the UFMG's Institutional Project of Internationalization chose to work with a distribution proportional to the total demand from the 57 Postgraduate Programmes. Parametrizing the cost of mobility abroad and the support to initiatives of internationalisation at home, a strategic decision was made to allocate 60% of resources for mobility abroad and 40% of these resources to promote internationalization at home with the goal of increasing the capillarity of actions geared to internationalization. Therefore, keeping in line with the 60%/40% distribution of resources, priority will be first given to grants to support internships of UFMG PhD students abroad (PDSE). This type of mobility showed the highest level of demand among all Postgraduate Programmes. Within this funding line, priority support will be given to mobility of PhD students who develop their research under a cotutela (joint PhD)

scheme. Secondly, support will be given to the recruitment of early-career researchers (young talents) and post-docs with experience abroad. This is considered to be a strategic aspect for internationalization at home due to its high impact in terms of internal capillarity. Considering the future possibility of permanent employment, this initiative will also contribute in the medium run to reduce the endogenous nature and to increase the international experience among the members of the teaching staff. The third axis of investment will be the training of UFMG junior members of the teaching staff with fellowships for junior visiting scholars abroad. This capacity-building action aims to reduce the endogenic angle observed among the younger members of the institution's faculty who need training and professional experience abroad. The fourth focal point will concentrate on the organization of thematic workshops at UFMG to increase the interactions between UFMG research groups with other research groups of recognised excellence in partner institutions abroad. Finally, on a decreasing scale, support will be given to the capacity building of senior UFMG teaching staff with fellowships for senior visiting scholars abroad and to visiting professors from partner universities for short stays at UFMG. Support for prospective actions as well as for initiatives related to other projects outside the PrInt/UFMG matrix will close the list on terms of allocation of funds. In short, the main objective of the UFMG Institutional Project of Internationalization is the creation of a culture of internationalization through a transversal approach that allows groups of Postgraduate Programmes to make joint efforts to leverage initiatives among programmes with disparate grades while working together on strategic themes of an interdisciplinary nature. In the medium run, UFMG research groups, together with research groups from partner institutions abroad involved in the Institutional Project of Internationalization, will form international clusters of excellence with an impact on knowledge production, thus enhancing the visibility of UFMG as a world-class university. The Institutional Project of Internationalization constitutes a change of culture that is now irreversible within UFMG. The CAPES Call 041/2017 was warmly received by the university community precisely because it provides the means to materialize a pre-existing aspiration. This aspiration is also reflected in the institutional decision to organize four international seminars over the next two semesters, each one focusing on one of the themes proposed in this project. These seminars will foster the dialogue about the internationalization of postgraduate education at UFMG and strengthen interactions among Postgraduate Programmes in the development of the four transversal and contemporary themes that constitute the central objective of UFMG's Project of Institutional Internationalization.

3.2. Specific Goals

3.2.1. To participate in workshops and scientific events abroad

Support for the participation of UFMG faculty members in workshops and scientific events abroad in order to present and disseminate results of joint research related to the four themes of the project.

3.2.2. To consolidate the training and experience abroad of UFMG faculty members with a senior profile

Consolidation of the training and experience abroad of UFMG faculty members with a senior profile by means of fellowships for Senior Visiting Scholar Abroad (PVSE) at partner institutions. Priority will be given to staff training in foreign institutions that carry out joint research with UFMG related to the four themes of the project.

3.2.3. To recruit early-career researchers (young talents) with experience abroad to work at UFMG

Recruitment of early-career researchers (young talents) with experience abroad to work at UFMG. Priority will be given to recruiting talented young researchers with a proven record of international experience and a professional profile capable of being integrated into the institution's permanent faculty body in the future. These early-career researchers (young talents) will have as a priority task the development of research and teaching activities in direct and effective collaboration with UFMG research groups in topics related to the four themes of the project.

3.2.4. To attract internationally renowned visiting professors with highly recognised experience

Attraction of internationally renowned visiting teachers for short-term stays at UFMG with the aim of interacting transversally with UFMG faculty members and students. These visiting professors will have as a priority task the development of research and teaching activities in direct and effective collaboration with UFMG research groups in topics related to the four themes of the project.

3.2.5. To train abroad UFMG faculty members with a junior profile

Training of UFMG faculty members with a junior profile abroad with the aim of having them acquire international experience. Fellowships for Junior Visiting Scholar Abroad (PVJE) at partner institutions of higher education of international acclaim will be given to staff training in foreign institutions that carry out joint research with UFMG in topics related to the four themes of the project.

3.2.6. To increase the number of doctoral theses carried out under a double degree scheme (cotutela)

Increase in the amount of double degrees at PhD level, carried out under a cotutela scheme with partner universities abroad. Encouragement to PhD theses closely related to the development of joint research projects. Priority will be given to theses that generate knowledge production in co-authorship or multiple authorship with international partners in topics related to the four themes of the projects.

3.2.7. To increase the amount and the impact levels of indexed publications

Increase in the quantity and on the impact levels of indexed publications, generated through joint initiative and developed in co-authorship or multiple authorship with international partners, focusing on objects of study related to the four themes of the project.

3.2.8. To recruit postdoctoral fellows with experience abroad to work at UFMG

Recruitment of postdoctoral fellows with experience abroad to work at UFMG. Priority will be given to the recruitment of postdoctoral fellows with a proven record of international experience and a professional profile adequate to collaborate in the development of research activities in direct and effective interaction with UFMG research groups in topics related to the four themes of the project.

3.2.9. To train human resources abroad at PhD level

Training of human resources abroad at PhD level for mobility purpose and international experience with grants for PhD internship abroad (PDSE) at partner institutions. Priority funding will be given to PhD theses developed in collaboration with partner institutions abroad in topics related to the four themes of the project.

3.2.10. To develop joint innovative research

Development of joint research in the field of sustainability, risk management and governance with a view to the production of innovative knowledge generated in collaboration with international partners. Such cross-cutting and cross-disciplinary research projects will be closely related to the Millennium Development Goals (MDG) and the Sustainable Development Goals (SDG) of the United Nations, aimed at fostering state-of-the-art research in topics related to the four themes of the project.

3.2.11. To promote actions geared towards internationalization at home

Promotion of actions geared towards internationalization at home, especially those with a focus on hosting and advisory services. This goal is related to the organisation of academic seminars and cultural events and to the welcoming of international students and faculty to UFMG as well as to the preparation of UFMG faculty members, students and administrative staff for mobility abroad and international experience.

3.2.12. To increase the offer of foreign language courses at postgraduate level

Increasing offer of foreign language courses at postgraduate level, especially in English and in Spanish. This goal is directly targeted to increasing the levels of linguistic proficiency and the learning of foreign languages for academic purposes among the faculty members, students and administrative staff at UFMG.

3.2.13. To develop linguistic proficiency actions

Development of linguistic proficiency actions with a focus on increasing levels of competence in foreign languages. These actions include diagnostic tests and activities aimed at enhancing foreign language skills for academic purposes among faculty, student and technical-administrative members.

3.2.14. To organize prospective trips abroad

Organisation of prospective trips abroad with a view to increasing and consolidating UFMG's strategic international partnerships in topics related to the four themes of the project, namely, sustainability, risk management and governance; new technologies and frontiers of science; health and well-being; and human rights.

4. STRATEGIES

4.1. Strategy for the consolidation of existing international partnerships, as well as the construction of new partnerships and cooperation projects to increase the relationship between the Brazilian institution and research groups abroad

The consolidation of the UFMG process of internationalisation is an institutional commitment that has been kept throughout the university by the past Administrations. The Office of International Affairs (DRI) and the Office for Technological Transfer and Innovation (CTIT) act in the identification of notices, grants and research funds, as well as in the search of the most appropriate research groups to encourage and assist them in their attempts to raise funds. UFMG encourages the consolidation of existing international partnerships through the formalisation of agreements between research groups, motivating applications for bilateral cooperation bids, such as CAPES/COFECUB and CAPES/PROBRAL, among other international cooperation programs financed by Brazilian and foreign development agencies. The University invests heavily in the consolidation of interuniversity research networks through the induction of joint research and co-authorship, encouraging an increase in the number of theses carried out under a cotutela (double degrees). It also encourages the bi-directional flow of researchers in different stages of training. As part of a prospective strategy, the Office of International Affairs works to identify partner universities with a high potential for joint collaboration with UFMG and, in the medium and long term, strives to strengthen the strategic nature of collaboration with these institutions, with a view to increasing their impact. The result of this process leads to the construction of strategic international partnerships, differentiated from regular partnerships because of their high potential for institutional impact. The prospect of new strategic partnerships, developed by the Office of International Affairs over the last few years, includes working missions between partner universities and the establishment of reciprocal mobility actions geared towards the student and teaching bodies of each institution. The Centres for Specialized Studies of the UFMG

(Centre for African Studies-CEA, Centre for European Studies-CEE, Centre for Indian Studies-CEI, Centre for East Asian Studies-CEAO and Centre for Latin American Studies-CELA) were created in 2013 with the aim of ensuring the empowering UFMG with a new avenue for initiative in the international scenario. The centres work in a complementary way to the work done by the Office of International Affairs, also carrying out prospective actions, especially in the context of initiatives in geographic regions with which UFMG has an incipient articulation, strengthening the vocation for the production and dissemination of knowledge about the regions upon which the centres concentrate their work.

4.2. Strategy to attract foreign students to Brazil

The attraction of foreign students depends on the enhancement of UFMG visibility in an international scenario. The several student mobility agreements signed by UFMG and the development of strategies to promote the university worldwide are part of the strategy to enhance that visibility. Recently, UFMG redesigned its website, with extended content in foreign languages and has dedicated special attention to the development of trilingual websites in Portuguese, English, and Spanish for the postgraduate programs. A world-class university should be able to attract foreign students to short-, medium- and long-term activities. For actions of this latter type, free courses of Portuguese as an Additional Language are offered for foreign students who enrol in undergraduate or postgraduate courses at UFMG. Additionally, there is also great potential for attracting foreign students to short or medium-term courses by increasing the offer of courses taught in a foreign language. The offer of undergraduate and postgraduate academic activities, particularly in English, has been increasing continuously at UFMG. On a smaller scale, this also happens with Spanish and other languages, contributing to promote a multilingual environment at the university. Welcoming and hosting activities are also a prime consideration in terms of attracting foreign students. At UFMG, these actions are carried out by the Office of International Affairs (DRI), which provides support to international students and visitors. The actions developed include the preparation and orientation of students coming to Brazil, reception upon arrival and the development of extracurricular activities throughout the semester. The Office of International Affairs also manages vacancies in the university housing, ensuring residential accommodation in agreements where there is a clause of reciprocity for housing. In 2017, UFMG launched its first Summer School in Brazilian Studies aiming at offering students from all over the world courses on several aspects of Brazilian studies from different perspectives. The first edition received students from 11 countries who took courses in English on economics, politics, law, history, geography, cultural activities. They also had the chance to take an intensive course on Portuguese as an Additional Language. A second edition of the school with a higher number of vacancies is scheduled for 2018, In the near future, UFMG intends to carry out this initiative twice a year in order to promote the UFMG abroad and attract new foreign students.

4.3. Strategy to attract faculty and researchers with international experience

Foreign professors and researchers, working in centres of excellence abroad, are invited to participate in temporary work assignments at UFMG through the University's Postgraduate Programs. International events which are held in Belo Horizonte or in other cities in Brazil are used to optimise the funding of these foreign collaborators. Their stay in at UFMG is funded with resources from the University budget so as to allow collaboration in research projects, teaching activities and the co-supervision of students. Launched recently and in the process of internal selection by the Central Administration, UFMG Call 001/2018 (<https://ufmg.br/comunicacao/noticias/cancada-chamada-do-programa-professor-visitante>) will allow the hiring of up to 50 teachers visitors to work at UFMG for periods ranging from 2 months to 4 years, a legally-imposed limit, and will enable the recruitment of international staff to work at the University, promoting a change of culture and fostering the UFMG process of internationalisation. Another important initiative is the Franco-Brazilian Chairs Program at UFMG, funded in partnership with the French Embassy in Brazil. This program brings to the UFMG senior professors of French institutions of higher education for a minimum period of 45 days and a maximum of four months. The stay of the French visiting professor always takes place in the academic period. During his stay at UFMG, the French professor has teaching, research and extra-mural obligations. It is a very successful program that could be expanded to include other countries. The Institute for Advanced Transdisciplinary Studies (IEAT) at UFMG also promotes a program of Visiting Chairs that, in the last four years, has brought 20 foreign researchers to UFMG. The aim of the IEAT program is to combine cutting-edge themes with innovative approaches of a transdisciplinary perspective. This program, with a budget guaranteed by IEAT, will continue to run in the coming years. As mentioned in the objectives of the UFMG proposal to the Capes Call 041/2017, 40% of the resources invested at UFMG will be allocated to bring visiting professors, early-career researcher and postdocs with international experience to work at UFMG in postgraduate programs to carry out research and extra-mural activities. The intention is not only to insert UFMG in the international context, but also to absorb part of these professionals, already internationalised, as permanent members of the UFMG the teaching staff through their participation in selection processes for permanent staff members.

4.4. Strategy to prepare the scholarship holders for the period abroad as well as for their return, especially in order to increase the knowledge appropriation by the institution

Actions for internationalization at home are often held at UFMG to make it more accessible to members of the university to become familiar with multicultural practices, with international visitors and with other languages. These are actions that also prepare students and faculty members for periods of mobility abroad, especially in terms of linguistic proficiency, since the number of universities abroad that offer courses in Portuguese is

reduced. The Office of International Affairs (DRI) has a Language Proficiency Section in charge of keeping an effective communication channel between DRI and the Faculty of Letters (FALE), proposing and supporting actions that stimulate language proficiency among the UFMG community, so that they can act in diverse academic contexts with the appropriate proficiency levels. In this sense, UFMG has played a leading role in the teaching of foreign languages as an instrument of internationalisation in the country, highlighting the relevance of teaching and learning foreign languages for academic purposes, including English, Spanish, French, German, Italian and Portuguese for foreigners, both for undergraduate and postgraduate students. In line with the UFMG's institutional project of internationalisation, a proposal for a Resolution for Language Policy was prepared in 2017, addressing UFMG's Council for Education, Research and Extra-Mural Affairs (CEPE). When approved, it will be a significant advance in the internationalization process of the university, stimulating the language training of all segments that make up the university community. UFMG also has an Internationalization Committee, which is part of the Office of International Affairs. The Committee encourages faculty members who have recognized international experience to work in selection processes for student mobility and to engage in discussing issues related to the internationalisation process of the university. On the student side, there is also a policy of absorbing experience acquired within the scope of academic mobility. The selection process for international undergraduate mobility offers a higher score to students who show engagement in curricular activities after they return from their exchanges abroad. Thus, students can bring the knowledge acquired in the period of mobility to apply and share it with other members of the UFMG community.

4.5. Describe innovative strategies that will be used by the institution that were not mentioned above

In order to succeed in the institutional consolidation of the UFMG process of internationalisation, it is imperative to motivate all members of the university community with a spirit of institutional internationalisation, a movement that requires periodic and broad discussions with all actors involved in the process of internationalization, both faculty and students. Administrative staff members must assume a prominent role in the process so that UFMG becomes, in the shortest time possible, a world-class university. Since 2014, the Office of International Affairs (DRI) has been promoting internationalisation seminars at UFMG, addressing subjects such as "The internationalisation of postgraduate studies under scrutiny", "The role of foreign languages in internationalization," "The internationalisation of extra-mural activities. A new series of events is planned around the themes proposed in the UFMG institutional project of internationalisation. In the second half of 2018, international seminars on "Sustainability, Governance and Risk Management" and "New Technologies and Frontiers of Science" will be jointly organised by the Office of International Affairs and the Office of the Pro Vice-Chancellor of Postgraduate Education. In the first half of 2019, the seminars will focus on the themes "Health and Well-being" and "Human Rights". UFMG

expects to invite international participants from partner universities who are interested in the four themes and to involve the UFMG community, stimulating the interaction among different Postgraduate Programs and foreign visitors in an effort to institutionalise the internationalization process. The internationalisation of the student body at UFMG begins at undergraduate level and has been stimulated for more than a decade through the Minas Mundi international mobility program. Minas Mundi is the largest international mobility program among Brazilian universities. It brings together in a single call all placements negotiated in bilateral mobility agreements for undergraduate students. The program aims to promote scientific and cultural exchange between UFMG and foreign partner institutions, providing approximately 250 undergraduate students at UFMG each year with an international academic experience that will integrate their curriculum and personal trajectory. With the progressive increase in the number of partnerships signed with the UFMG, the number of continents, countries and institutions of destination offered in the selection process has increased significantly. African and Asian institutions have been included in the Minas Mundi program, as well as new placements resulting from the establishment of partnerships with Russian institutions and the expansion of agreements with Latin American universities. UFMG aims to strengthen and expand this program in the coming years, providing its students with an international experience from the beginning of their academic journey. Strategic programs to attract international visitors to promote new collaborations are also carried out by the Institute of Advanced Transdisciplinary Studies (IEAT). These initiatives allow IEAT to invite senior researchers with a reputation of international excellence to give lectures, conferences and debates open to the public and to interact with researchers and research groups at UFMG. These visitors may be directly invited and selected by the IEAT steering committee or proposed by UFMG members to the Institute. In addition to being relevant to current, advanced and transdisciplinary topics, which form part of IEAT's mission, this program also allows the establishment of exchanges and contacts between UFMG and qualified researchers from international institutions and research groups, with funding guaranteed by IEAT. In the international scenario, universities of excellence invest heavily in the training of human resources dedicated to internationalisation. Likewise, UFMG intends to stimulate a policy of training administrative staff members internationally, enabling them to work effectively in foreign languages and acquired good practices of international cooperation, including legal knowledge and intercultural communication skills. Therefore, it is vital to invest institutionally in the training of human resources aimed at the internationalisation of the university. This can be achieved through language courses and seminars carried out to meet the demand for capacity building. Internal calls offering opportunities for the international mobility of administrative staff members abroad are also part of the university's strategic goals. Another strategy to improve internationalization at UFMG is to streamline the process of formalising partnerships, cotutelle and double-degree agreements that have strategic potential for UFMG, perhaps allowing some level of decentralization of the agreements.

5. THEMES AND PROJECTS

5.1. SUSTAINABILITY, RISK MANAGEMENT AND GOVERNANCE

In the course of recent decades, given its centrality to political agendas and institutional discourses, sustainability has become one of the keywords for statespersons and societal leaders. If, on the one hand, the semantics of sustainability often relates to rupture-avoidance and accommodation strategies – i.e. the search for enhanced industrial efficiency, cleaner developmental processes, ‘green economy’ standards, harm-alleviation structures, or less hazardous forms of market-led capitalism etc.-; on the other, sustainability can be often connected to contemporary alternatives found around the world to deal with disruption and to put an end to the mounting collateral damage being inflicted to each and every living creature – that is, environmental deterioration, climate change, energy sources’ depletion, and resource-draining dynamics – chiefly stemming from previous stages of accelerated industrialization and urbanization. The emerging emphasis on sustainable practices comes with a wake-up call for better risk assessment and risk management, lest the planet in itself, not to mention seven billion individuals who currently live on Earth’s surface, and every generation coming after us, might suffer in dramatic manners the utmost consequences of being reckless and/or negligent to humanity. The arguable need for effective governance mechanisms can also be seen as the other side of the coin, once the humanly quest for greater control over risk almost invariably manifests as institution-building efforts. Governance in certain thematic areas, particularly in the fields of collective security, public services, health, education, culture, human rights, food security, migration, energy supply, the environment, water, finance, labour relations, among others, now appears to be instrumental to any attempt of delivering a sustainable order at both local and global scales.

5.1.1. Development, inclusion and exclusion

From the 1950s onwards, the field of development economics emerged as a specific disciplinary domain, based on an analytical apparatus aimed at understanding and overcoming the economic backwardness of peripheral areas and the problems related to the structural reproduction of the separation between developed and developing countries. Over the following decades, these studies have surpassed the field of economics to embrace a major challenge of an interdisciplinary nature. At the beginning of the 21st century, in the scope of the United Nations efforts to promote the Millennium Development Goals and the Sustainable Development Objectives, launched in 2015, the relevance of promoting the issue of development in strict combination with the theme of sustainability became prominent. Inclusion and exclusion articulate directly to this problem, either in the perception that the reduction of socioeconomic inequalities is a precondition for the promotion of development, or in the understanding that several other problems related to the production of dynamics of exclusion, disarticulation and disintegration in the world can be thought in combination with

the issue of development, aiming at the promotion of convergences and sustainable solutions. UFMG develops research at the interface between development and sustainability, focusing on issues related to inclusion and exclusion processes in the areas of applied social sciences, humanities, engineering and health sciences. Adopting a cross-disciplinary character and a multidisciplinary perspective, the project aims to develop sub-projects in the following themes: population dynamics and human development; socioeconomic development; political economy; regional inequalities and structural change with external restraint; alternative economies, globalization and sustainable local and regional development; analysis and modelling of socio-environmental systems applied to sustainable development; the role of international organizations in globalized society; innovation systems and centre-periphery dynamics; business negotiation and regulation; access to justice by way of law; economy and administration of justice; environmental stress in communities; shared wealth; epidemiology and public health services; circular economy applied to water, air and soil management for the development of smart and sustainable cities.

5.1.2. Climate change

Over the past decades, the observed reductions of ice cover in polar regions and glaciers, increases in mean sea level, more frequent and prolonged heat waves, droughts, forest fires and the occurrences of floods have become increasingly evident. All these events corroborate the predictions of the effects of global warming. Climate change poses a major threat to humanity, affecting health, compromising water, food and energy security and increasing natural and technological risks. Global warming will also result in significant impacts on ecosystems and biodiversity to which feedback effects have the potential to accelerate such changes. The effects of climate change vary regionally, with impacts that depend on social vulnerability and on the political and economic ability of affected communities to cope with such challenges. The research agenda on climate change includes (i) improving environmental monitoring and modelling to better understand, predict and manage impacts at different spatial scales; (ii) evaluating these impacts taking into account environmental and social vulnerability as well as the political, institutional and economic coping capacity of affected communities; (iii) contributing to improve risk management and increase environmental, socioeconomic, political and institutional resilience to the impacts of climate change. UFMG already develops research on climate change at the interface between the domains of demography, ecology and economics. Adopting an interdisciplinary perspective, this project aims to develop subprojects in the following themes: socioeconomic and demographic dimensions of climate change: impacts, vulnerabilities, adaptation and public policies; effects of climate change on biodiversity and ecosystems.

5.1.3. Borders and migrations

Modernity favoured the proliferation of sovereign national units, whose exclusive jurisdiction over their own territories had as a logical corollary the establishment of borders between countries – which ended up including or excluding human beings as a function of their national belongingness. This operation of inclusion and exclusion of persons as subject to a country's jurisdiction came along with the development of economic as well as juridical instruments on which a state's authoritative command should rely. So, in very practical terms, borders are supposed to demarcate the limits of a state's zone of exclusive rule. Unsurprisingly, nations might – and did – engage in border conflicts in the course of history, since the benefits that come with the package of territorial sovereignty are too tempting not to generate periods of disturbance and even ruthless competition among the rulers. Another topic that has increasingly merited a watchful eye on the part of scholars and world leaders is migration. Whether motivated by economic, security, religious or professional reasons, migrations now concern a huge number of individuals around the globe, and account for a growing flux of money and data as well. Be them legal or illegal, purposeful or not, migrations have very often been accompanied by debates on the political, cultural and ethical questions underpinning human mobility across borders. One cannot cover the whole complex range of issues pertaining to migration studies while turning a blind eye to global tourism, human trafficking, internal displacement, refugee crises, political asylum, climate migration, rural exodus, historical diasporas, educational migration, workforce mobility, among others. UFMG carries out research on the interface between borders and migrations in the areas of political science, demography, economics, geography, law and history. Adopting a transdisciplinary perspective, the project aims to develop subprojects in the following themes: territorial decentralization and social policies in ibero-american countries from the perspective of equity; demographic dynamics, vulnerability and socio-environmental sustainability in border environments; spatial mobility of the population and global economic dynamics; frontiers of labour and technologies.

5.1.4. Sustainability of cities and territories

Cities present the potential to foster cultural activities and creative industries, sustainable patterns and environment-friendly practices, smart structures and connectivity networks. More than half of the planet's inhabitants are now settled in urban zones, which raises questions with regard to sustainability of current day-to-day lifestyles, provided all the high ecological impact that is brought about. At the same time, approximately 60% of the world's GDP is directly associated with urban territories where our lives actually take place, as they happen to situate labour, economic and knowledge-making, as well as leisure, sports, and well-being actions. UFMG develops state of the art research on the sustainability of cities and territories in the areas of architecture and urbanism, computer science, history, dentistry, sanitation, environment and water resources and public health. Drawing on an

interdisciplinary paradigm, the project aims to develop subprojects in the following themes: theory, production and experience of space; geoinformatics and urban computing; spaces, territories and circulation of knowledge from the modern world to the contemporary world; knowledge of the territory for the construction of oral health policies; environmental sanitation actions for health promotion, preservation of the environment and sustainability; health assessment in cities; public health structuring policies.

5.1.5. Natural resources with a focus on biodiversity and environment

Natural resources comprise all the biotic (originated from the biosphere) and abiotic (originated from the geosphere) resources, renewable or not, which are or can potentially be used as inputs for the production of manufactured goods or for the provision of services to the human societies. The conservation and sustainable management of natural resources in all scales are of crucial importance to the richness and wellbeing of the world population. The relevance of research with emphasis on biodiversity and environment is evident considering that two Brazilian biomes, the *Cerrado* and the Atlantic Forest, are recognized as global hotspots. This classification indicates the major threats observed in each domain, since hotspots are highly endemic and have already lost most of their original coverage. Therefore, the substitution of a linear economy for a circular economy and a production model based on non-renewable for one based on renewable natural resources will be the new paradigm of a world socioeconomic development based on the preservation, sustainable use and optimization of natural resources. It is of extreme importance the adequate management of natural resources, and the prioritization of integrative interdisciplinary studies about this theme. UFMG develops research on natural resources with a focus on biodiversity and the environment in the areas of plant biology, microbiology, ecology, metallurgical engineering, materials and mining, geography, sanitation, environment and water resources and zoology. Adopting a multidisciplinary approach, the project aims to develop subprojects in the following themes: vegetal biodiversity in the Anthropocene; past, present and future patterns and processes at different spatial scales and biological organization; applied microbiology to global natural resources; exploitation and use of natural resources in balance with the environment; assessment and classification of wetlands and aquatic systems for protection and sustainable management purposes; analysis of the effectiveness and challenges of the implementation of the instruments of management of water resources from the integration with territorial policies and the dynamics of the participatory processes; planning and management of water resources: tools and methods within a framework of global, regional and local change.

5.1.6. Energy

The finiteness of the non-renewable energy sources and the environmental impact of present energy production processes, even renewable ones, pose to humanity a big issue that must

be solved within the next few decades: the migration of energy production processes to long-term sustainable models. This issue must be tackled considering its multiple dimensions: production systems, energy storage, energy delivery, efficient usage, in all cases considering the cultural aspect of sustainability-oriented solutions. Energy technology is transitioning from a centralized view, in which big companies were in charge of production, transmission and storage, to a peer-to-peer model in which every house or company is able to produce and store energy that is sufficient for part of its demands. How to ensure the proper regulation of such a system, how to cope with peak loads and how to modernize the infrastructure under a near-zero marginal cost are some of the challenges of energy production in the future. UFMG currently develops research of frontier on energy in the areas of computer sciences, engineering and chemistry. The research project is composed of sub-projects in the following themes: new technologies for the inspection and supervision of electrical systems; nuclear energy applied to engineering and environment; eolical turbines; flywheel energy storage systems; hydraulic frackling and the production of oil and gas; efficient technologies of processes and instrumentation using clean energy sources; development of new technologies for energy generation, conversion and storage.

5.2. NEW TECHNOLOGIES AND FRONTIERS OF SCIENCE

Building on new discoveries from basic and applied science fields but also integrating older technologies that are still controversial and relatively undeveloped, new technologies are characterised as radically novel and fast growing trends with the potential to exert a considerable impact on socio-economic domains. Including varieties which are interdisciplinary by nature and bridging a gap between academic research and society, new technologies are perceived as capable of significantly changing the status quo at local, regional and global levels. Research in basic sciences at the frontiers of knowledge has a pathfinder importance in the development of new technologies, favouring the emergence of new technologies, materials and creative solutions. Globalisation trends, such as a more integrated transnational economic system, the rise of global communications networks, the advent of international consumer markets, among others, have posed a challenge to industry leaders as well as to public policy makers and academia. Past and present unsolved needs of society also urge the development of knowledge-based creative solutions that can radically change existing practices and help promote new ways of life and novel forms of technological and industrial practice with the goal to bring about significant changes and to offer viable alternatives for contemporary challenges in the short, medium and long term.

5.2.1. Biotechnology

Biotechnology comprises all the technological processes that encompass the direct or indirect use of organisms (in their natural state or genetically modified) or their parts (compounds of primary or secondary metabolism) for the production of goods and services in agriculture,

industry, health and environment. Biotechnology is a fundamentally interdisciplinary and transversal area, and the development of biotechnological products and services embraces synergic activities of basic and applied research and technological development. Biotechnology is a priority and indispensable area for the socioeconomic development of any nation. Biotechnological state-of-the-art research is developed at UFMG in the interface between the areas of life sciences, exact sciences and engineering. In 2017, UFMG deposited 90 patent requests in Brazil and 20 abroad. UFMG is, on this moment, one of the leading Brazilian universities concerning the technology transfer to the private sector, particularly in the area of biotechnology. The research project is composed of sub-projects in the following themes: biotechnology applied to human and animal health; biotechnological resources applied to the treatment of oral diseases; biotechnological innovation to validate new pharmacological targets; nano-bio-engineering as an innovation platform in physiological sciences; development of biotechnological products and processes; new sustainable technologies and biotechnological innovation to create healthy food; biotechnology in microbiology; biotechnological alternatives to the development of vaccines and diagnostics; biotechnology applied to the study of chronic inflammatory and/or autoimmune diseases; genetics in the study of biodiversity, biotechnology and health; physical methods applied to biotechnology; ethical and juridical aspects of biotechnology; human resource formation in biotechnological innovation.

5.2.2. Agri- and Biobusiness

The agribusiness and biobusiness sector has a potential for expansion and consolidation in Brazil, due to its territorial extension, to its climatic characteristics and to the availability of natural resources and biodiversity, besides a strong tradition of basic and applied scientific research already developed on those themes. It should be added that the country has an important role on food security for the world population. However, even more than in other sectors of the economy, it is necessary to include in the agenda for the sector of agribusiness and biobusiness, the dimension of sustainability, articulated with issues such as the environment preservation and the mitigation of climate changes. The management of innovation in the university includes the protection of intellectual property, the technology transfer, the technological partnerships, the entrepreneurship and the strengthening of innovation culture, not only in the academic community, but also in society. There are two ways to make the scientific and technological knowledge generated in research institutions produce economic development: through technology licensing agreements and investment in the creation and development of technology-based start-up companies. UFMG has a major role in the agenda of development of agribusiness and biobusiness, stimulating the development of technology in the theme and its transfer to companies. UFMG currently develops top research in agribusiness and biobusiness in the areas of animal sciences, food sciences and law. The research project is composed of sub-projects in the following themes:

innovation and expansion of knowledge in animal science; food quality and security; regulation of agribusiness (agrifood law).

5.2.3. Basic sciences and their applications

Basic Sciences study the properties of natural phenomena. They allow us to understand the world we live in and boost the development of new technologies to advance the exploration of our universe. Basic sciences are essential to the development of new theories, experiments and innovative methodologies used in the analysis of complex systems in various research areas and in the most diverse temporal and spatial scales. Defying our minds, researchers explore natural phenomena from subatomic particles to galaxy groups, from ultra-fast events to others that last billions of years. Basic Science applications constitute the base of technological advancement and leverage the frontiers of knowledge in subjects of global interest. At UFMG state-of-the-art research is ongoing in basic science areas such as statistics, physics, mathematics and their interfaces. The research project is composed of sub-projects in the following themes: advanced methodology in data analysis; star and planet formation and evolution; quantum optics and quantum information; physical and biological systems modelling; properties of atomic and molecular systems; strongly correlated systems; field theory; algebra with polynomial identities and groups; partial differential equations; algebraic geometry; dynamical systems.

5.2.4. Big data and artificial intelligence - New techniques for the extraction, generation and use of knowledge

Recently, several technological advances have enabled the generation of large data sets, concerning diverse aspects of nature and society. The ability to meaningfully exploit those data is being developed, at this moment, in the fields of Artificial Intelligence and Big Data. This ability is already producing significant impacts in a large variety of daily processes, allowing the rise of systems that interact with humans in different contexts, the response to events in unstructured environments, the search for non-obvious relationships, and so forth. This project will have two different fronts. The first one is the development of new Artificial Intelligence and Big Data techniques, in order to advance the performance and reach of the existing techniques. The second is the application of those techniques in the diverse areas of human activity. UFMG develops advanced research in big data and artificial intelligence in areas such as computer science, management and the organization of knowledge, political science and social communication. This research project consists of sub-projects in the following themes: cyber-physical and social approach for a massively connected society; algorithms and technologies applied to the treatment of large data volumes; artificial intelligence; ontological modelling of information systems; democracy and democratization of communication.

5.2.5. Industry 4.0

Industry 4.0 is an ongoing trend towards the creation of industrial plants that scale-up their integration of parts for the construction of a complex system that becomes capable to respond to external demands and to internal changes in a flexible and fast way. This is allowed by a global coordination of processes, supported by the full usage of intelligent devices endowed with local processing resources and by strong communication links between those parts. The superposition of hierarchical levels provides the necessary organic structure for performing the new tasks. While the third industrial revolution focused on automation and data acquisition, Industry 4.0 focuses on real-time connectivity and data usage for autonomous and optimized decision making. There are three pillars: digitization, sensing and optimization. The objective of this project is to develop new technologies in the three pillars, in order to reduce costs, improve quality, increase productive efficiency, and maximize the financial return and social benefit of modern production processes. At UFMG the theme of Industry 4.0 is developed by top research groups working in the domains of computer science and engineering. The research project is composed of sub-projects in the following themes: industry 4.0 and the internet of things; development of intelligent optimization systems for Industry 4.0 services; characterization, modelling and optimization of complex systems: production planning and logistics.

5.2.6. Languages in a digital context

Languages, in their most diverse variants, constitute a complex theme and a great contemporary challenge. In addition to verbal language instantiated in the natural languages across the planet, human beings use non-verbal languages, including visual, gestural, spatial and musical languages, in their communicative processes. In the twenty-first century, various types of human languages evolved with new forms and new uses, reflecting changes in language production, language consumption, as well as in language usage for communicative purposes. This project aims to study how the different forms of language operate and evolve in an increasingly connected world, mapping the use of oral and written language in digital environments as well as the use of computational tools for the production and automatic translation of technical and colloquial texts. At UFMG state of the art research on languages in the digital context is underway in the areas of linguistics and music. The research project consists of sub-projects in the following themes: language and digital practice; methodological developments in corpus linguistics; linguistic and computational applications; computer-assisted translation, post-editing and multilingual text production; sound and instrumental models in analytical and creative processes with digital media.

5.2.7. Creative educational solutions

Constant and ever faster social changes, not to mention the emergence of new actors and processes across the world, have rendered education a global concern. In order to contain the seemingly unstoppable rise of exacerbated ideologies and put a halt on the occurrence of violent acts, educational and cultural policies were included in high-level debates since the early twentieth century, with a view at furthering solidarity and peace. Education is an important theme for contemporary societies not only for its potential to prevent conflicts, but also to create alternative pathways to challenge the globalization of capitals, the revolution in mass media and communication techniques, the advent of new technologies, and its massive impacts on people's formation, which could accentuate the existing social gap among citizens and nations. UFMG develops prominent research in creative educational solutions in the areas of social communication, education, music and dentistry. The research project is composed of sub-projects in the following themes: education for sustainability; social and educational technology for childhood, youth and institutions; music in education, human development and rehabilitation; health educators and researchers training for the XXI century.

5.2.8. Natural resources and state of the art technology

Biotic and abiotic natural resources, renewable or not, are or can potentially be used as inputs for the production of manufactured goods or for the provision of services to humanity. The substitution of a linear economy by a circular economy and a production model based on non-renewable by one based on renewable natural resources will constitute the new paradigm of a world socioeconomic development based on the preservation, sustainable use and optimization of natural resources. Therefore, it is of extreme importance the prioritization of integrative interdisciplinary studies about this issue, especially aiming at the development of advanced technologies applied to the abundant Brazilian natural resources. This project ranges from a survey of organisms that may show commercial, biotechnological, ecological and evolutionary importance, to the application of cutting-edge technologies for research on biotic resources and also to the development of new technologies that may apply sustainable biotic resources to solve the demands of humanity. UFMG develops high-level research on natural resources and state-of-the-art technologies in the areas of bioinformatics, geology, dentistry and chemistry. The research project is composed of sub-projects in the following themes: biodiversity prospection of organisms of commercial, biotechnological, ecological and evolutive interest; investigation of the presence of critical mineral deposits in Brazil; the use of natural resources to the development of dental products; new technology development for sustainable use of natural resources in a scenario of increasing industrialization.

5.2.9. Novel materials e nanotechnology

The implementation of new technologies, from the stone age to molecular biology, is based on the development of novel materials. Energy production and storage, information processing, machineries and biomedical solutions, among others, are based on the use of materials properties. Given the limited supply of minerals and the threat of global warming, new materials must be developed that are more energy-efficient and cause a reduced impact on the environment (pollution generation, contamination) in their production, usage and disposal. Nanotechnology is the ultimate level of material science, dealing with matter in the molecular level to allow the control of processes in that scale, or to develop large scale superior materials. The control of matter in nanoscales brings engineering and biomedicine to frontiers not yet explored. UFMG develops state-of-the-art research in novel materials and nanotechnology in the areas of computer sciences, pharmaceutical sciences, engineering, physics, dentistry and chemistry. The research project is composed of sub-projects in the following themes: nanocomputation and computer nanotechnology; development of new materials with advanced properties for biomedical, pharmacological and structural applications; new technologies for the development, characterization and improvement of dental materials; development of advanced materials and nanotechnologies: study, processing, technological solutions and sustainability.

5.2.10. Cities and territories

Every city, regardless of its size, has the potential of fostering its cultural activities and creative industries, sustainable standards and environment-friendly practices, smart structures and connectivity networks, wellbeing and gender equality principles, social values and political traditions. Spatiality matters – it suffices to recall that UNESCO and other international agencies have been keen to promote every year a host of cities, territories and specific sites to be closely watched, and taken care of, on grounds of their standing as representative of humanity's historical, cultural and/or architectural most valuable heritage. More than half of the planet's inhabitants are now settled in urban areas, while around 60% of the world's GDP directly relates to them. Cities are precisely where our day-to-day lives will take place and, for that matter, are increasingly becoming a research object in the most diverse fields of expertise. UFMG hosts innovative research groups working on cities and territories within the areas of architecture and urbanism, computer sciences, law, economy, leisure studies, history, geography, dentistry and public health. The research project is composed of sub-projects in the following themes: theory, production and experience of space; geocomputing and urban computation; time, space and law; contemporary dialogues on urbanism, territory, nature and development; sports and leisure politics: accessibility and appropriations of public and private spaces; culture, ecology and politics; knowledge of the territory for the construction of oral health policies; evaluation of health in cities, their determinants and structuring public policies.

5.3. HEALTH AND WELLBEING

As a fundamental human-right, health is a bridge for wellbeing. Aligned with the United Nations Sustainable Goal to ensure healthy lives and to promote well-being for people at all ages, this challenge is concerned with the quality of healthcare offered to individuals and populations, with actions geared to strengthening health systems and policies. At UFMG, education, research and services support actions aimed at promoting equitable access to prevention, treatment and self-care, thus strengthening citizens' autonomy. Brazil is a country with deep regional and social inequalities. An increasingly aging population lives through an intensified demographic and epidemiological transition, combining a triple burden of diseases: diverse chronic conditions, emerging and neglected infectious diseases, accidents and violence. The challenge of improving health and well-being in Brazil requires substantial, scalable, and innovative solutions. Around 12 million hospitalizations are performed annually in the Brazilian Unified Health System (SUS), reflecting hundreds of thousands of procedures of high cost and complexity. With large populations at stake, innovations must include effective policies and establishing big data relationships of records pairing and linkage to support individual, longitudinal monitoring and real-time evaluation to improve performance and quality of the health system.

5.3.1. Aging

Brazil experiences a demographic transition marked by an increasingly aging population. With 60 years-old and plus as the fastest growing age segment in the country, there is an annual average increase of one million aging people in Brazil, estimated to reach 41.5 million in 2030. This demands innovative research and solutions to improve health and well-being of this ageing population. Brazil and other WHO member countries approved in 2016 the Global Strategy and Plan of Action on Aging and Health. Seeking to move beyond disease focus, the strategy emphasizes healthy aging, from a functional skill perspective that allows older people more autonomy in being and living in a healthy and well-being perspective on a day to day basis. The direct (demographic and healthy) and indirect (economic, social and political) reasons of the population ageing and their effects constitute important subjects that are currently internationally debated. The uncertainty about the aging process in the next decades in Brazil further requires an increase in scientific collaboration with well-established international working groups from pioneering countries in demographic transition. UFMG develops top research related to the aging process aiming at improving the quality of life of the population older than 60 years, mostly involving the research areas of rehabilitation science, sports science, dentistry and demography. The research project is composed of sub-projects with a focus on integrated oral health care during the aging process; the role of physical activities for the maintenance and integrated development of the human body; demographics dynamic and aging from the point of view of the state, markets and families.

5.3.2. Big Data and artificial intelligence applied to health and biology

Recently, several technological advances have enabled the generation of large data sets, concerning diverse aspects of nature and society. The ability to meaningfully exploit those data is being constituted, at this moment, in the fields of Artificial Intelligence and Big Data. Big Data and Artificial Intelligence can be used for the analysis and interpretation of large databases in health and biology. In Brazil, the Unified Health System (SUS) has a number of information systems that evaluate the health policies and services, as well as the assistance provided to the population, however this resource is seldom used to improve health outcomes and health care in general. This large body of records can be used to compare clinical practices and care trajectories, and thus guide the planning and management of health services. Biology often works with the analysis and interpretation of "omic" data (genomic, transcriptomic, proteomic, metabolomics, systems biology etc.). A common feature of such studies is the vast amount of heterogeneous data to be analysed. In this scenario, artificial intelligence and Big Data allow the extraction of biologically relevant properties from the datasets, allowing their interpretation within the biological scope. UFMG is leading research using Big Data and Artificial Intelligence in areas such as Bioinformatics, Public Health and Management and Organization of Knowledge. The research project consists of sub-projects that promote data integration in omic scale to interpret complex biological systems, focusing on patients and aiming at an epidemiological, economical and care trajectory evaluation in the Brazilian Unified Health System (SUS). The expectation is that, in the near future, each citizen will have a single medical chart, electronically available.

5.3.3. Chronic diseases

In the context of global public health, infectious and parasitic diseases are gradually being replaced by chronic and degenerative diseases. In Brazil, chronic non-communicable diseases (CNDs) constitute a health problem responsible for 72% of deaths, caused mainly by four major groups of illnesses: cardiovascular, cancer, chronic respiratory and diabetes. These CNDs, together with autoimmune diseases, metabolic, neurological/neurodegenerative are intensified by aging. Knowing the occurrence, magnitude and distribution of CNDs and their main risk factors in the country, as well as identifying their economic, social and environmental determinants is part of the epidemiological surveillance work that is continuously dependent on researches covering chronic diseases. UFMG stands out in the national scenario by the number and experience of Post-Graduate Programs that work directly with chronic diseases. There are currently 15 programs working on the subject, in the areas of cell biology, biochemistry and immunology, surgery and ophthalmology, physiology and pharmacology, microbiology, rehabilitation sciences, child and adolescent health, molecular medicine, neurosciences, dentistry, pathology, public health, bioinformatics, food science and clinical and toxicological analyses. For more than half a century, UFMG develops research with a great impact on the population health and well-being, which already includes

many international long duration partnerships. The research project is composed of sub-projects that focus on the natural history of CNDs and their social, behavioural, nutritional, biological and genetic determinants during a lifetime to genomic studies and pathological and clinical aspects of infectious, inflammatory and degenerative diseases, including reproductive dysfunctions, neurological diseases, diabetes, neoplasias and oral health.

5.3.4. Emergent and neglected diseases

To exacerbate the public health problem, Brazil has suffered from several negative indicators of emerging and neglected diseases. Brazil is one of the countries with the highest number of tuberculosis cases, with about 69 thousand new cases and 4,500 deaths a year, and close to 800 thousand people living with HIV. Parasitic diseases, considered by WHO as neglected by governments and pharmaceutical companies, are aggravated by the large urban contingents living in poverty, causing an increase in morbidity and mortality rates of the population. Globally, more than one billion people in 149 countries suffer from these neglected diseases. There has recently been a resurgence in Brazil of outbreaks of viral diseases nowadays considered controlled, such as Yellow Fever and Measles, as well as a large expansion of Arbovirus, such as Dengue, Zika and Chikungunya. Measures for a better understanding of the establishment and development, detection, prevention and treatment of such diseases are, therefore, of great importance and urgency. UFMG has a wide and outstanding experience in emerging and neglected diseases, developing research in the areas of clinical and toxicological analysis, bioinformatics, food science, physiology and pharmacology, microbiology, computer science, infectology and tropical medicine, parasitology and pathology. The research project is composed of sub-projects that focus on biomarkers in several neglected diseases and the effect of nutrition on them and emerging ones. These include initiatives that use genomic and proteomic methodologies in the study of human diversity and diseases of national relevance, both neglected and emerging, and studies of correlations of real data and web data to specifically predict outbreaks of Dengue and Zika. Finally, the project also integrates researches with the biology of parasites and their vectors and the control of parasitic diseases, especially Chagas disease and leishmaniosis.

5.3.5. Diseases: from public policies to new drugs

From medical-pharmaceutical assistance to disease prevention, public health policies have high global repercussion and impact in the international press. The world has witnessed an increase in the incidence of chronic and degenerative diseases, together with an augmentation in the population life expectancy. Viral diseases thought to be controlled have experienced outbreaks in several countries, notably in Brazil, placing the world population in a constant state of concern and alertness. In this panorama of instability and threats to health systems in different countries, there is urgent need of research that points the best practices to be adopted to prevent epidemics that do not respect territorial or cultural boundaries.

New public policies, aligned with scientific principles, are fundamental to guarantee the populations health which, in turn, impacts on the health of the entire planet. In addition to prevention and epidemic control measures, it is necessary to intensify the development of new drugs, both synthetic and natural, favoured by the rich Brazilian biodiversity. From the analysis of the health-disease process and with the aim at restoring health and preserving the quality of life of the population, the participants in this project at UFMG develop research in public health and economy, in chemistry, in drug development and pharmaceutical sciences. The research project is composed of sub-projects that include pharmacological and toxicological, pre-clinical and clinical trials, aiming at the development of drugs from natural or synthetic products. More specifically, the research project intends to carry out planning and preparation of new drugs for the treatment of chronic, emerging and neglected diseases, research areas that have been developed for a long time in the institution and that already include the participation of international collaborators. Finally, this project also houses an initiative that correlates social economy and health, generating data applicable to the design and evaluation of public health policies in Brazil and in the world.

5.4. HUMAN RIGHTS

The approval of the 1948 Universal Declaration of Human Rights by the United Nations General Assembly without any opposing votes paved the international recognition that all human beings are entitled to dignity and equal and inalienable rights. Human rights are often expressed and guaranteed by national and international law. Challenges to human rights are not an exclusivity of any historical period. Throughout history, human rights have faced distinct and multiple challenges. Such challenges include but are not limited to clarifying the meaning and grounds of human rights and making them effective. It also involves their implementation into relation with other values with which they might conflict and with the development of new technologies. The growth of intolerance, the rise of authoritarianism, human displacement, inequality, discrimination, the dilution of privacy are some examples of contemporary threats to human rights. Human rights have different dimensions (legal, political and moral) and might be better addressed from interdisciplinary or transdisciplinary perspectives. Resolution 09/2016, approved by the UFMG Council for Teaching, Research and Extra-Mural Affairs on 31st May 2016, enforces regulations against the violation of human rights and favouring the eradication of discriminatory acts of any kind within the university, highlighting the position of the institution in favour of the different dimensions of these rights (legal, political and moral). In this context, the promotion and defence of human rights constitute not only an institutional objective, but also an object on which the university devotes its efforts to its study and understanding.

5.4.1. Big Data and Artificial Intelligence - societal implications

Recently, several technological advances have enabled the generation of large data sets, concerning diverse aspects of nature and society. The ability to meaningfully exploit those data is being constituted, at this moment, in the fields of Artificial Intelligence and Big Data. At the same time, the availability of all kinds of data about everything and everyone raises security, privacy, legal and social issues on the use of these data in conjunction with Artificial Intelligence Techniques. Those technologies have spurred reflections about conflicts involving basic rights, governmental policies and the corporate power in a transnational scale in an ultra-connected world, where the collection, generation and processing of information is easily accessible to all the actors, from individuals to nation states. Particularly, in the debate on the Internet and new technologies, there is a need for a compromise between privacy (e.g. the "right to be forgotten" and the "right for data suppression"), transfer of data and the restrictions imposed by the emerging forces of big data. UFMG develops state-of-the art research on the social implications of Big Data and artificial intelligence in the areas of social communications and law. The research project is composed of sub-projects in the following themes: power regimes and memory in digital contemporary platforms; law, work and technologies; interfaces between privacy, data transfer and Big Data in the global order; innovation of information technology and decision-making processes.

5.4.2. Traditions, cultures and arts

The multiple voices that shape tradition, culture and art bring to us a plural phenomenon, so: traditions, cultures and arts. Tradition is what the past gives us and we pass on. It is nevertheless a process of continuous (re)construction, whose re-signification of the meanings of the past is undoubtedly a central question. Culture, in the different connotations of the term, tells us how collectively human societies know the world and express themselves in it (being arts one of the most direct names of this expression). History, philosophy, and the humanities, literatures and arts share connected interests in these fields, but in the same way also the social, applied, physical and life sciences, in different ways, share important perspectives on culture, which are transmitted by tradition and expressed through the arts, whether in the sense of poetic creation or the specific concentration of skills in an activity. Within this particular combination of knowledge, the theme takes shape as a truly interdisciplinary and international research effort, in which varied issues are discussed, ranging from reflections on art and education, image politics, the relation between art and science, literature and the arts in Brazil and the world, cultural circularity, norm, law and religion, truth, value and criticism, history, memory and modernity, to debates on alternative forms of production, or socio-political and environmental crises. UFMG carries out research on traditions, cultures and arts in the areas of arts, social communication, law, economics, literary studies, philosophy, history and music. Taking an interdisciplinary perspective, the project aims to develop subprojects in the following themes: art and technological poetics;

creation and preservation; image politics and transdisciplinarity in the contemporary world; celebrity observatory; emergence, action and permanence of celebrities in the Brazilian context; normative production and religious pluralism in comparative perspective; studies on memory and historical culture; musicology in Brazil.

5.4.3. Violence, conflicts and regulation

Violence, conflicts are polysemantic terms and may refer to a large spectrum of matters. Violence can come in various forms and contexts and be directed against different subjects (oneself, another person, or, still, a group or community). Conflict may refer to a variety of settings, such as a divergence of ideas or interests, a legal dispute or an armed clash. Regulation, meaning the prescription of norms, is an overarching term, which may be applied to the conduct of any natural or legal person. Its formulation must be articulated to the establishment of the objective conditions for the maintenance of equilibrium. This project aims to approach such a theme under the viewpoint of structural determinants, such as the production of space; inequalities; social dynamics; the economic violence; sociability in its multiple dimensions; multicultural coexistence in cities; the democratic erosion; political tolerance. Issues related to national and international institutional ordering and juridical culture will be tackled too. Finally, some propaedeutic and contextual dimensions will be discussed too: the access to justice; the criminal intervention; the dimension of education; leisure and culture; the relations between violence and health. UFMG develops research on the interface between violence, conflicts and regulation in the areas of political science, law, economy, leisure studies, geography, history and sociology. Adopting a multidisciplinary perspective, this project aims to develop subprojects in the following themes: political tolerance in a comparative perspective; deliberation in public schools; criminal intervention, violence and conflict in contemporary society; inequalities, social dynamics and public policies; political violence and the struggle for human rights in the recent history of Latin America; sociability in multiple dimensions.

5.4.4. Public policies and political regimes

State and society are in constant interaction for the sake of public policy making. In this sense, public policies can be understood as the most tangible outcome of a socio-political cycle which comprises not just the setting of a public agenda, by way of public consultation and/or electoral mechanisms, but also more technically-driven procedures of formulation, decision making, and implementation of these policies with regard to a vast range of issue-areas – health, education, public security, social concerns, defence and foreign affairs, environment, energy, labour etc. Studies that assess political regimes – taken not in their strictest sense (democracy vs. autocracy), but in an extended one, where the cause-and-effect chains

associated with types of state (presidentialist, parliamentary, semi-presidentialist etc.), legislatures, relations between powers (Executive, Legislative, Judiciary), political parties, government bureaucracies, interest groups, public opinion, constitutional elements – are also of fundamental importance for explaining and even predicting social outcomes and agents' behaviour within a given politico-institutional context and set of rules. UFMG develops research on public policies and political regimes in the areas of political science, information science, social communication, law and sociology. This project will investigate issues such as: democracy; public policies; development; human rights and political legitimacy; cultures, mediation and complex socioinformational processes; taxation and distributive justice; law internationalization and transitional justice; compared dynamics in international economic relations. More specific issues will be addressed too, such as: compared perspective of political regimes in Latin America, USA and Europe; assessment of health policies, health institutions and health services; wellbeing projects in Latin America; territorial decentralization and social policies; justice in Latin America; democratization of communication; deliberative system and conflict negotiation; political violence and fight for human rights.

5.4.5. Languages, gender and identities - Discourse analysis, languages and vulnerable groups

The experience of vulnerable social groups has been marked by increasing processes of violence, exclusion and invisibility. Identity and memory are central dimensions for understanding both the processes of violation of rights and the recognition and inclusion of these groups. Such concerns have required studies that take into account the multiple phenomena of language, such as textual/discursive genres in corpora diverse and discourses, materialized in texts, which are manifested in different social instances. Examining the identity marks of the subjects and the different voices that cross their "speech", questions of social gender and argumentative strategies that partake in the construction of the various points of view contribute to the confrontation of this topic. UFMG carries out state-of-the-art research about discourse analysis, languages and media of vulnerable groups in the domains of social communication and linguistics. This project will investigate issues such as: the study of media in contemporary societies at the local and global level, which is central to understanding of their relation to the production of invisibilities and disqualification of vulnerable groups, as well as the production of ruptures in the processes of vulnerabilization. In this globalized context, vulnerable groups such as Brazilian Indians, their culture and language are threatened to disappear, which makes it relevant to promote the documentation, description, revitalization and reconstruction of the phylogenetic history of surviving indigenous languages.

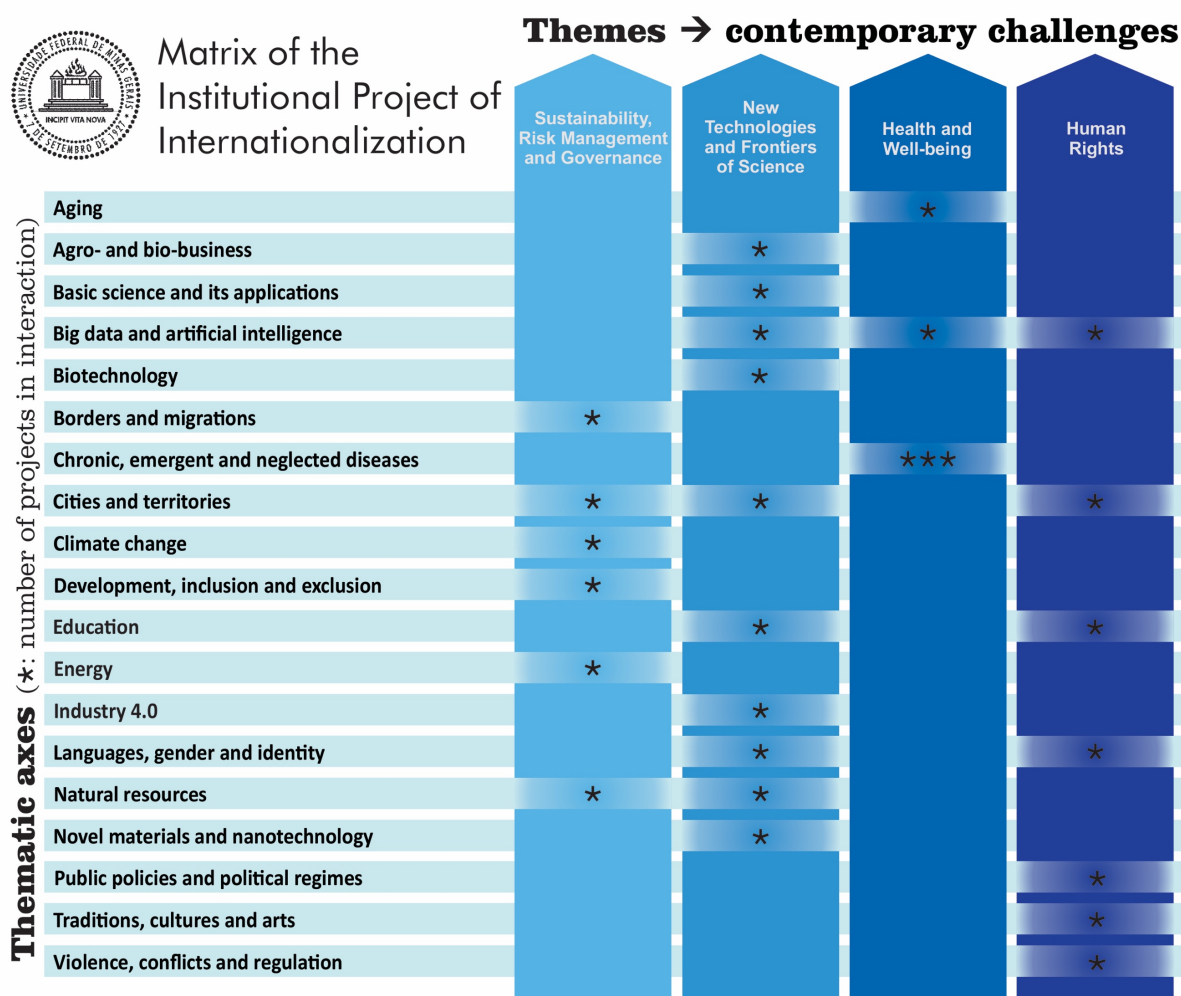
5.4.6. Cities, territories and human rights

Cities and territories are platforms where health and well-being are cultivated, gender equality norms and fundamental rights are disseminated, social values and political traditions are promoted. International bodies have become ever more engaged in elevating, year after year, a host of cities, territories and specific sites to the condition of special places to be kept under surveillance and preserved, given their representativeness as historical, cultural and architectural heritage of humankind. Thus, the human right to a sustainable environment to be enjoyed by this and all the coming generations must be firmly grounded in cities and territories. UFMG develops research at the interface between cities, territories and human rights in the areas of law, economics, leisure studies, geography and history. Adopting a multidisciplinary perspective, the project aims to develop subprojects in the following themes: time, space and law; urbanization, territory, nature and development; sport and leisure policies; accessibility and appropriation of public and private spaces; culture, ecology and politics in Brazil and in the world; territorialities and humanities.

5.4.7. Education as a human right

The globalization of education at every level – primary, secondary and tertiary – brings along the commercialization of education as an important and urgent challenge to be dealt with. The plurality of educational systems might be jeopardized as education is not seen as a human right but, instead, treated like a commodity to be included in the portfolios of foreign countries and companies alike. The transformation of education from a public policy to a private service can generate consequences to the curricular structure as well as the dissemination of ideological conceptions. By the same token, importing a set of non-indigenous values could negatively influence the individual's gaining of critical conscience and considerably affect the opinions of young students, the diversity of identities and of cultures around the globe, the universal right to literacy and the preservation of memory, not to mention the fate of specific disciplines that would hardly fit into this new trend. UFMG develops education research as a human right in the areas of social communication, education, language studies, studies of leisure, geography, history and music. Adopting an interdisciplinary perspective, the project aims to develop subprojects in the following themes: education for sustainability and institutionalization of childhood; analysis of dialogical, argumentative and investigative practices of teachers and students of basic education and higher education; literacy and written culture; analysis of school and non-school practices in diverse contexts and social vulnerability; education policies and the restructuring of the teaching profession faced with the challenges of globalization and the internationalization of research; cognitive and cultural aspects of the language in use: comparative and interactive studies in the syntactic-semantic-pragmatic interface.

5.5. STRATEGIC MATRIX OF THE UFMG INSTITUTIONAL PROJECT OF INTERNATIONALISATION



6. PARTICIPATING PhD PROGRAMS (listed in alphabetical order)

1. PHD PROGRAM: BUILT ENVIRONMENT AND SUSTAINABLE HERITAGE
2. PHD PROGRAM: ARCHITECTURE AND URBANISM
3. PHD PROGRAM: CLINICAL AND TOXICOLOGICAL ANALYSIS
4. PHD PROGRAM: ARTS
5. PHD PROGRAM: BIOINFORMATICS
6. PHD PROGRAM: PLANT BIOLOGY
7. PHD PROGRAM: CELL BIOLOGY
8. PHD PROGRAM: BIOCHEMISTRY AND IMMUNOLOGY
9. PHD PROGRAM: ANIMAL SCIENCE
10. PHD PROGRAM: APPLIED SCIENCES FOR SURGERY AND OPHTHALMOLOGY
11. PHD PROGRAM: BIOLOGICAL SCIENCES: PHYSIOLOGY AND PHARMACOLOGY
12. PHD PROGRAM: BIOLOGICAL SCIENCES: MICROBIOLOGY
13. PHD PROGRAM: COMPUTER SCIENCE

14. PHD PROGRAM: INFORMATION SCIENCE
15. PHD PROGRAM: REHABILITATION SCIENCES
16. PHD PROGRAM: HEALTH SCIENCES: CHILD AND ADOLESCENT HEALTH
17. PHD PROGRAM: FOOD SCIENCE
18. PHD PROGRAM: SPORT SCIENCES
19. PHD PROGRAM: POLITICAL SCIENCE
20. PHD PROGRAM: NUCLEAR SCIENCE AND TECHNOLOGY
21. PHD PROGRAM: PHARMACEUTICAL SCIENCES
22. PHD PROGRAM: SOCIAL COMMUNICATION
23. PHD PROGRAM: DEMOGRAPHY
24. PHD PROGRAM: LAW
25. PHD PROGRAM: ECOLOGY, CONSERVATION, AND WILDLIFE MANAGEMENT
26. PHD PROGRAM: ECONOMICS
27. PHD PROGRAM: EDUCATION
28. PHD PROGRAM: STRUCTURE ENGINEERING
29. PHD PROGRAM: PRODUCTION ENGINEERING
30. PHD PROGRAM: MECHANICAL ENGINEERING
31. PHD PROGRAM: METALLURGICAL, MATERIALS, AND MINING ENGINEERING
32. PHD PROGRAM: STATISTICS
33. PHD PROGRAM: LEISURE STUDIES
34. PHD PROGRAM: LINGUISTICS AND APPLIED LINGUISTICS
35. PHD PROGRAM: LITERARY STUDIES
36. PHD PROGRAM: PHILOSOPHY
37. PHD PROGRAM: PHYSICS
38. PHD PROGRAM: GENETICS
39. PHD PROGRAM: GEOGRAPHY
40. PHD PROGRAM: GEOLOGY
41. PHD PROGRAM: KNOWLEDGE MANAGEMENT AND ORGANIZATION
42. PHD PROGRAM: HISTORY
43. PHD PROGRAM: TECHNOLOGICAL INNOVATION AND BIOPHARMACEUTICS
44. PHD PROGRAM: INFECTIOUS DISEASES AND TROPICAL MEDICINE
45. PHD PROGRAM: MATHEMATICS
46. PHD PROGRAM: MEDICINES AND PHARMACEUTICAL ASSISTANCE
47. PHD PROGRAM: MOLECULAR MEDICINE
48. PHD PROGRAM: MUSIC
49. PHD PROGRAM: NEUROSCIENCE
50. PHD PROGRAM: DENTISTRY
51. PHD PROGRAM: PARASITOLOGY
52. PHD PROGRAM: PATHOLOGY
53. PHD PROGRAM: CHEMISTRY
54. PHD PROGRAM: SANITATION, ENVIRONMENT AND WATER RESOURCES
55. PHD PROGRAM: PUBLIC HEALTH
56. PHD PROGRAM: SOCIOLOGY
57. PHD PROGRAM: ZOOLOGY

7. PROPOSAL FOR ALLOCATION OF RESOURCES

The total budget is estimated in R\$138,000,000.00 (one hundred and thirty-eight million Brazilian Reais) in four years. In the first year, the budget is estimated in R\$30,000,000.00 (Thirty million Brazilian Reais). This figure is based on resources received from Capes over the last few years and foresees a sustainable growth rate over four years. The budget will be adjusted in 10% every year to keep an increasing trend throughout the life span of the project, targeting the expected quantitative and qualitative growth of the PhD Programmes at UFMG. Thus, the budget is expected to reach R\$33,000,000.00 (Thirty-three million Brazilian Reais) in the second year, R\$36,000,000.00 (Thirty-six million Brazilian Reais) in the third year, and R\$39,000,000.00 (Thirty-nine million Brazilian Reais) in the fourth year. The distribution of resources is displayed in the table below.

7.1. Allocation of resources per theme and modality (absolute numbers per year)

Expected number of grants in the following modalities: PhD grand abroad (PGA); Junior Visiting Professor Abroad (JVPA); Senior Visiting Professor Abroad (SVPA); Workshops (WSP); Visiting Professors (VP); Early-career Researchers (ECR). Post-Docs (PDoc).

THEME	# Budget millions R\$	# PhD	# Faculty	# Students	# PGA 6 m.	# JVPA 3 m.	# SVPA 3 m.	# WSP	# VP 15 d.	# ECR 6 m.	# PDoc 6 m.	Total 100%
THEME I	7	27	280	874	49	14	17	0,8mi	37	18	23	20%
THEME II	10,5	32	497	1424	75	21	27	1,2mi	56	28	36	30%
THEME III	10,5	36	367	961	74	21	26	1,2mi	55	27	36	30%
THEME IV	7	21	311	968	49	14	17	0,8mi	37	18	23	20%
TOTAL	35		1455	4227	247	70	87	4mi	185	91	118	100%

8. POLICIES

8.1. Policy for selection of foreign partners, considering that 70% (at least) of the resources should be earmarked for partnerships with institutions based on countries that Capes maintains effective cooperation (listed in Annex I of the call)

As registered in the UFMG Strategic Plan for Internationalization, the university has signed agreements with institutions of higher education that exceed five hundred in number. These agreements are divided into letters of intent, memorandums of understanding, research agreements, exchange agreements, general cotutelle agreements and strategic partnership agreements. The celebration of these different types of agreement presupposes different stages in the level of interaction between partner institutions as well as configuring different goals. In developing its institutional policy to choose of foreign partners, UFMG recognises a gradual increase in the establishment, strengthening and consolidation of international

partnerships, which involves prospecting and fostering exchanges and knowledge production, achieving, at the end, a level of interaction that culminates in the consolidation of strategic institutional partnerships. This is the path that UFMG adopts in its internationalization process and that it intends to maintain during the execution of the Institutional Project of Internationalization. In the context of the Capes Call 041/2017, UFMG's internationalization actions will have as one of its main objectives the consolidation of existing international partnerships to improve academic production and the training of students and faculty, fostering the establishment of collaboration networks that are dedicated to innovative and transdisciplinary projects. To achieve this goal, UFMG proposes to identify foreign institutions with high potential for joint collaboration and, in the medium and long term, to strengthen the strategic character of the interaction with these institutions in order to increase the impact of this collaboration. Currently, UFMG has signed several partnership agreements with US and European institutions. With some of them, UFMG already has double diploma (cotutelle) and joint research agreements. More recently, UFMG has begun to expand partnerships with universities in the BRICS countries (South Africa, China, Russia and India) as well as with institutions of higher education in Japan, South Korea, Australia and New Zealand. In its Institutional Project of Internationalisation, UFMG aims to encourage and support partnerships with foreign institutions that demonstrate an unequivocal intent of reciprocity and strategic complementarity, negotiating the waiving of academic, administrative and bench fees.

8.2. Grant policy and internal selection process for specific actions, within the funding lines of the Capes-PrInt program. In the case of cooperation projects with foreign institutions, the proposer should specify the application of funds, the plan of activities, reciprocal funding, academic mobility, technical - scientific production, counterparts in the partner institutions, among others

The Institutional Project of Internationalisation of UFMG foresees internal selection processes for the purpose of promoting specific actions and choosing beneficiaries. The institutional proposal of the Institution has a cross-cutting and transdisciplinary character that, without allocating specific space to any Postgraduate Program, manages to group them around four major thematic axes which are in line with proposals submitted by 57 Postgraduate Programs in different areas of knowledge. In addition to that, by allowing the thematic grouping of Postgraduate Programs with distinct grades in the last CAPES Quadrennial Assessment, the UFMG institutional project of internationalisation makes it possible to bring together research groups to work around convergent objectives and, thus, to leverage Graduate Programs with lower grades through direct and effective interaction with recognized programs with grades of excellence. The internal selections, in their various modalities, will be regulated by the Management Committee of the Institutional Project of Internationalization and conducted through internal calls with transparent merit criteria. These internal calls will receive application for projects that are subpart of the four main themes. In the case of the 28 projects

listed in this proposal, applicants shall present, for internal selection, an activity plan, a budget and an estimate of academic mobility and joint technical-scientific production. Where appropriate, proof of external funding provided by partner institutions will also be used as a selection criteria.

8.3. Policy for hiring faculty with recognized scientific performance at an international level

In its journey towards becoming a world-class university, UFMG is aware of the need to train faculty members with a wide international experience. In this sense, the Institution has invested in the training of its faculty abroad and sought to attract new permanent members with international experience. As a complementary strategy, UFMG launched in early 2018 the Internal Call 01/2018 for hiring Visiting Professors. This is an institutional counterpart to the Capes Call 041/2018 that will enable the hiring of up to 50 visiting professors to work at UFMG for a maximum period of four years in the case of foreign professionals. Through this initiative, UFMG hopes to attract researchers with recognized scientific performance in the international arena. Another aspect of UFMG's policy for staff recruitment concerns the high potential of attraction that the Institution exercises when conducting public selection processes for members of the permanent staff. UFMG has increasingly insisted on a policy of hiring staff with international experience. The Institution intends to take advantage of the opportunity to attract early-career researchers (young talents), offered by the Capes Call 041/2017, to attract young professionals with international experience and create internal conditions, through the opening of public selection processes, to seek the recruitment of some of these professionals as members of the Institution's permanent faculty.

8.4. Policy to increase proficiency in foreign languages for students, postgraduate faculty and technical staff that have a direct relationship with the proposed Internationalization Project

Actions aimed at fostering linguistic proficiency are one of the most important goals for the internationalisation of UFMG. In this context, the development of a Language Policy and its implementation contributes significantly to make foreign language proficiency an institutional priority. UFMG is one of the institutions with a significant national presence in the Languages Without Borders program. In addition to this presence, UFMG has expanded linguistic proficiency actions at UFMG through the strengthening and institutionalization of teaching activities in languages other than Portuguese. The offer of courses aimed at teaching languages for academic purposes is already a reality at UFMG and it continues to be expanded. The revision of the institutional legal frameworks, such as the General Regulations for Graduate Studies (2017) and Undergraduate Studies (2018) open the possibility of offering curricular activities in a foreign language, especially in English or Spanish, in undergraduate and postgraduate courses. At the latter level, the offers started as elective courses and many

of them are now being included in the curricular structure as permanent activities. Another internal action of internationalisation that has been developed and which should be increased is the offer of academic courses or modules in English or other foreign languages, taught by foreign visitors, either in person or on online mode, through videoconference from their home institutions. Thus, the possibilities of interaction in a foreign language for the students participating in these activities increase, creating a natural condition for the use of other languages in the classroom. An internationalised university should be able to attract foreign students for short-, medium- and long-term activities. For actions of this latter type, the university must guarantee the offer of Portuguese as an Additional Language (PLA) courses for foreign students who attend undergraduate or postgraduate courses at UFMG. On the other hand, there is great potential for attracting foreign students to short or medium-term courses through the provision of courses taught in a foreign language. The offer of undergraduate and postgraduate academic activities, especially in English language, has increased continuously at UFMG over the last few years. On a smaller scale, this also happens with Spanish and other languages, contributing to promoting a multilingual environment in the university.

8.5. Policy for recognition of academic and scientific activities performed by faculty and students abroad

It is vitally important to ensure an effective credit recognition policy for academic and scientific activities carried out abroad, either by faculty or students. With regard to students, UFMG has changed its institutional legal frameworks, such as the General Rules for Graduate Studies (2017) and Undergraduate Studies (2018) to encourage curricular flexibility. These regulations have facilitated the use of credits and academic and scientific activities carried out abroad. These new rules also facilitate the recognition of activities developed by students during exchanges at undergraduate and postgraduate levels. Internal resolutions also facilitate the recognition of training activities abroad by faculty members. UFMG intends to continue advancing the improvement of good practices that, in collaboration with partner institutions abroad, also guarantee the recognition of credits and the academic and scientific activities carried out at UFMG by foreign visitors, both faculty and students.

8.6. Policy for hosting and support of foreign faculty, researchers and students

UFMG has an International Admission and Hosting Section, responsible for the reception of foreigners at UFMG and for preparing students for exchanges abroad. In recent years, the Hosting Section has become a centre of strategic actions for the internationalisation of the Institution, with a work focused on the orientation and reception of foreign teachers and students at UFMG. These activities start each semester with an International Student Orientation Week that offers international studies familiarization activities with the university community. Although the focus is on the participation of foreign students, foreign faculty may

also benefit from these activities. In addition, a series of seminars, called "Seminars Viver UFMG (Live UFMG)", is part of the institution's hosting policy. In the "Living UFMG" seminars, carried out by the Central Administration, participants have the opportunity to learn about different aspects of what UFMG has to offer, the opportunities that open up to them, and the choices to be made. Another important action is the creation of an orientation guide about UFMG in Spanish and English, aimed at international visitors, following the example of the "Live UFMG" online application, so that the reception of foreign students can be enhanced. In order to ensure institutional visibility for foreign faculty and students, an institutional identity card has been created for international visitors, ensuring institutional insertion and immediate access to UFMG's facilities and infrastructure. With regards to the international admission process, foreign students can apply online, both for undergraduate and postgraduate admission. The implementation of a robust electronic system, which accompanies international students from their initial application to the end of their stay, is of vital importance for the reception and management of international mobility. Finally, one last important point in the reception of international students is the use of accommodation vacancies in the university's halls of residence, assuring accommodation for students coming to UFMG in the scope of the exchange agreements in which there is a clause of reciprocity for housing. In addition, during the holiday season, vacancies in the halls of residence allocated to international students can potentially be used to house international students taking short-term courses.

8.7. Policy for the appropriation of knowledge and experience acquired abroad by the beneficiaries of the actions of the Institutional Internationalization Project

A world-class university is an institution in which internationalisation has been consolidated as part of the internal culture of the Institution. This vision is one of the pillars of a policy to incorporate the knowledge and experience acquired abroad by UFMG faculty members and students into the university culture. The concept of internationalization at home, widely used in the international context, is used in conjunction with actions of international mobility. The aim is to increase the capillarity of the internationalisation process by means of internally developed actions that make it possible for faculty and students to acquire an international experience when they do not have the opportunity of an international experience abroad. Another permanent internal action is a series of internationalisation seminars focused on research, undergraduate, postgraduate and extra-mural activities. These seminars have been organised at UFMG in order to promote internal discussion about issues that are crucial for the process of internationalisation. With the increase in internationalisation activities, the aim is to increase the frequency and size of these seminars, disseminating international experience among members of the university community who have not yet travelled abroad, intensifying a change of culture and increasing the capillarity of internationalisation actions.

8.8. Policy for management and operationalization of the Institutional Internationalization Project

The office of the Pro Vice-Chancellor for Postgraduate Education has an administrative team trained to face challenges arising from the management and operationalisation of the Institutional Project Internationalization. Currently, there is a Postgraduate Academic Advisory Office linked to the Pro Voce-Chancellor's Office, an Executive Secretariat an International Office, a Financial Section, a Grants Section and a Scholarship Section, as well as an Administrative Secretariat. Together, the team members are in a position to face the institutional challenge of internationalization. In addition to this team, the Management Committee of the Institutional Project of Internationalization will count on the collaboration of ad hoc consultants, called to participate in committees which will be in charge of the internal selection processes.

8.9. Policy for monitoring and internal evaluation of the goals of the Institutional Internationalization Project

The International Policy Committee established by Resolution 06/2018, which established UFMG's Internationalisation Policy, is responsible for the internal monitoring and evaluation of the goals and execution of the UFMG Strategic Plan of Internationalization. In turn, the Institutional Project for Internationalisation is part of a broader plan for the internationalisation of the Institution, also involving actions at undergraduate level and extra-mural activities. Consequently, the International Policy Committee, in constant dialogue with the Management Committee of the Institutional Project of Internationalisation, will have the responsibility to monitor the actions to be implemented and the goals to be achieved in the short (by the end of the second year of its implementation) and in the medium term (until the end of the fourth year), in addition to pointing out to long-term priority strategic actions, submitting it to assessment by the Council for Education, Research and Extra-Mural Affairs (CEPE) for institutional approval. The UFMG International Policy Committee is also responsible for monitoring the implementation of the five-year Strategic Plan of internationalization, defining mechanisms for the collection and recording of all resulting activities in a database to be made available electronically; to prepare an annual report of the activities carried out, submitting it to the appreciation of CEPE; and to prepare, for consideration by CEPE approval, a five-year report of activities related to the approved plan.

8.10. Policy for the conciliation of national development programs supported by Capes to the internationalization effort

UFMG has participated, with great success, in the national development programs offered by Capes. There is, however, an increase in the internationalization effort in relation to

institutions in the country that interact with the UFMG in Professional Master's degrees, academic Master's and inter-institutional PhD Programs. The experience of faculty and students from these partner institutions in other parts of Brazil in the internationalization initiatives of UFMG extends the experience to other spheres. Aware of this responsibility, UFMG seeks to integrate faculty and students from other national institutions of higher education who participate in national programs in the process of internationalisation of the Institution.

8.11. Describe here other innovative policies that will be adopted by the institution that were not addressed in the above items

The internationalisation that UFMG aims for is based on the principles of reciprocity and solidarity between institutions, cultures and countries. It is guided by the diversity of the established cooperation, keeping the partnerships already consolidated and seeking to implement new collaborations. Internationalisation should also include as a priority a policy of inclusion, with a view to disseminating the scientific knowledge produced at the university among other segments of society. The transversality of the institutional actions and the amplitude across different areas of knowledge are also a strong priority. Developing internationalisation activities requires effective planning, concrete goals and effective actions that lead to the achievement of the desired objectives. Building on the basic principle that the internationalisation of higher education only happens, in fact, when a strong culture of internationalisation develops in the institution, it is imperative to spread among all members of the university community a spirit of institutional internationalisation, a movement that requires periodic and extensive discussions with the actors of internationalisation, both faculty and students as well as administrative staff members who need to assume an important proactive role so that UFMG becomes, in the shortest possible time, a world-class university. UFMG actively participates in networks with other international institutions. It has consolidated interactions with AUGM (Association of the Montevideo Universities Group), UDUAL (Union of Latin American Universities), the Coimbra Group, the Tordesillas Group and AULP (Association of Portuguese Language Universities). It has also become a member of the Worldwide Universities Network (WUN) and the BRICS University League (BRICS). Participation in these networks creates opportunities to enhance interaction among members, build trust, and increase levels of reciprocity, allowing for collaborative actions with greater potential for academic impact. Networking allows member of these institutions to develop joint research that, in turn, generates co-authored publications, always ensuring the bi-directional flow of researchers at different stages of their training. UFMG also has five Centres of Specialized Studies: a Centre for African Studies-CEA, a Centre for European Studies-CEE, a Centre for Indian Studies-CEI, a Centre for East Asian Studies-CEAO and a Centre for Latin American Studies-CELA. These centres were created at the end of 2013 and have gained significant momentum over the last four years. The five centres of specialized studies carry out prospective actions, especially in the context of geographic regions with which

UFMG still has little articulation, as well as strengthening the vocation to produce and disseminate knowledge about the regions on which their work is focused. The experience of the Centre of European Studies in the last two years, after obtaining funding from the European Commission for one module and two Jean Monet Chairs, has been implementing a systematic offer of courses and modules in studies about European integration in some UFMG undergraduate and postgraduate courses. Another important aspect in terms of an internationalisation policy concerns the relationship between the centres of specialised studies and the UFMG Institute for Advanced Transdisciplinary Studies (IEAT). The Franco-Brazilian Chairs Program at UFMG is another important point in actions of internationalisation at home. By bringing French professors from different areas of knowledge to teach and carry out research at UFMG for a minimum of 45 days and a maximum of four months, always during the academic term, the program manages to reach a wider audience, both faculty and students, who benefit from the interactions with the visiting scholars. The expansion of a Chairs program, such as the UFMG Franco-Brazilian Chairs program, involving partnerships with institutions in other countries, is an action of with high potential for academic impact. Finally, another relevant action of internationalisation at home is the organisation of summer/winter schools. The Office of International Affairs organised a first winter school in July 2017 through a joint initiative between the Centre of East-Asian Studies (CEAO) and the Centre for European Studies (CEE). The winter school in Brazilian studies, offered in English, was a successful initiative that shall be kept on a permanent basis. It may even be expanded to be also offered in the summer months of January and February in addition to a regular event in July.

9. COUNTERPARTS

9.1. Internationalization of the curriculum: Incorporation of international themes in postgraduate classes

Until the present moment, the bulk of internationalisation at UFMG has been more the result of individual initiatives rather than results stemming from actions which were institutionally directed. There are several levels of internationalisation of the curriculum, more incipient in undergraduate studies and much more advanced in postgraduate studies. At this latter level, individual initiatives have led to the development of an institutional scenario. The regular offer of courses in foreign languages has become a reality for most postgraduate programs, particularly for those programs which are already consolidated and offer training at PhD level. The internationalisation of the curriculum is currently a priority for the institution. The inclusion of foreign language courses in the curricular structure of these postgraduate programs is, thus, a natural consequence. This initiative also has positive implications at

undergraduate level since UFMG offers undergraduate students the possibility of enrolling in courses for advanced training at postgraduate levels (see CEPE Resolution 18/2014 at <https://www2.ufmg.br/sods/Sods/CEPE/Documentos/Resolucoes-Comuns>). This offer is associated with the institutional regulations which allow elective enrolment in postgraduate courses in order to strengthen undergraduate training and encourage more qualified admission to postgraduate studies. Since the Science Without Borders Program, in which there was great international mobility among UFMG undergraduates and postgraduate students, there has been an awakening on campus towards the relevance of internationalisation. Nowadays, as one walks across the UFMG campus, one can listen to people talking naturally in various languages, especially in English. This new environment is stimulated by the Central Administration of the University, as can be recognized, for instance, by the publication of UFMG Call 001/2018 (<https://ufmg.br/comunicacao/noticias/cancada-chamada-do-programa-professor-visitante>), for which up to 50 visiting professors will be hired to work in undergraduate and postgraduate levels and also engage in extra-mural activities. The university community has submitted 98 proposals to Call 001/2018, most of them describing the interest in hiring foreign researchers. This initiative tends to become regular practice, aiming at encouraging and supporting the presence at UFMG, on a temporary basis, of high-calibre researchers of international standing in all areas of knowledge. For all these visiting professors, teaching activities at undergraduate and postgraduate levels will be required, so that the growth in the number of courses in foreign languages by international faculty has become an irreversible process.

9.2. Production of international publicity material in other languages, including course websites

UFMG has invested, over time, in the expansion and improvement of the quality of materials aimed at enhancing institutional visibility abroad. Printed and digital materials, such as videos and institutional catalogues, have been produced and have been continually updated. Institutional videos are available at <https://www.ufmg.br/conheca/videos-institucionais.shtml>. They can also be searched and watched directly on YouTube at https://www.youtube.com/watch?time_continue=7&v=FMn0Wm2MEB0 for English and at <https://www.youtube.com/watch?v=oe6-Wy6gZvQ> for Spanish. Institutional catalogues, which have been printed for distribution to overseas visitors and used in institutional visits overseas, are available in both English and Spanish versions. The University's website, which was completely restructured in 2017, contains basic contents that attract the interest of

foreign visitors in English (<https://ufmg.br/international-visitors>). Similar content in Spanish is currently in preparation. An extensive investment has been made to update the websites of all Postgraduate Programs so that they can now display information of interest to foreign visitors, particularly for early-career researchers, postdocs, and potential PhD candidates. In 2016, the Office of the Pro Vice-Chancellor for Postgraduate Education, with the support of the UFMG Communication Centre (CEDECOM), provided Postgraduate Programmes with a template so that they could customize their pages in English and Spanish. These actions were financially supported by the Central Administration. The result of the template can be checked, for instance, at the website of the Postgraduate Program in Law (<https://pos.direito.ufmg.br/en/>), which includes an English version, and at the website of the Postgraduate Program in Education (<http://www.posgrad.fae.ufmg.br/site/>) with versions in English and in Spanish. To date, 78% of all Postgraduate Programs that offer PhD training have a website in English and 70% of them also have a version in Spanish. The move towards trilingual websites for Postgraduate Programs is currently an institutional goal, expecting to reach all websites in the near future.

9.3. Training and qualification of staff for institutional internationalization.

In the international scenario, world-class universities invest heavily in the training of human resources engaged in internationalisation. The European Union maintains a dedicated capacity-building program specifically designed for training of human resources for this purpose. The Office of International Affairs Office (DRI) has been supporting such training for members of the administrative staff working at Central Administration. However, it is necessary to stimulate an over-arching policy for training administrative staff who work on internationalisation across the University at undergraduate and postgraduate units, enabling them to work in a foreign language and acquire good international practices that also include legal knowledge and intercultural communication skills. Therefore, the University needs to formulate a training policy for human resources focused on internationalisation. This can be achieved through language courses promoted by the university and also by means of seminars promoted by the Office of International Affairs. The University makes an institutional effort towards the internationalisation of its staff, aware of the fact that all institutional actors need to be involved and empowered. Thus, in addition to the natural involvement of faculty and students, who have their own motivations to join the process of internationalisation at UFMG, there have been concrete measures to cover the needs and aspirations of administrative staff members. For those members of staff working for the Central Administration, foreign-language skills are a long-established requirement. In recent years, the University has invested in hiring executive secretaries for various institutional sections and departments. More recently, negotiations have begun to offer specially-designed courses within the Languages Without Borders program to increase the proficiency of secretaries working for Postgraduate Programs. Finally, even if on a small scale, training abroad has been offered to a few administrative staff members who have participated in

capacity-building activities offered by the Montevideo Group (AUGM) in South-American countries or in Summer Schools organised by partner institutions in the European Union.

9.4. Counterparts offered by foreign partnership institutions, when applicable

UFMG signed its first key strategic partnership agreement in 2016. The Key Technology Partnership Agreement (KTP) with the University of Technology Sydney marked a first step towards an institutional policy of offering selected partner institutions the possibility of signing similar agreements UFMG. In the KTP agreement, the University of Technology Sydney recognises UFMG as a strategic partner and, thus, is able to provide financial support for jointly developed projects. In 2017, Macquarie University offered UFMG strategic funding for up to three PhD candidates to develop their doctoral dissertations under a double degree agreement (cotutelle) with the Australian university. More recently, in 2018, the University of Warwick offered UFMG funding for three young faculty members, identified as promising early-career researchers, to spend short periods at the English university and to develop joint research projects with members of the University of Warwick. These three examples are just a few illustrative cases of the huge potential counterparts being offered to UFMG by partner institutions abroad. The expertise and capacity installed at UFMG is widely recognised by several of these institutions, which spontaneously offer UFMG financing opportunities. The Institutional Project of Internationalization will allow UFMG to negotiate more counterparts from an academic and scientific perspective. In this sense, these counterparts are meant to develop naturally and organically as the joint actions grow in volume and intensity between UFMG and its strategic partners abroad.

9.5. Other counterparts, when applicable

Over the last 20 years, UFMG has developed a robust internationalisation strategy that has grown tremendously despite the economic difficulties faced by the country in recent years. This strategy includes a program for seed funding that the Institution uses prospectively. This program is called Support Program to International Cooperation Projects (PAPCI) is funded by the Office of International Affairs as a regular option to promote initiatives for prospecting partnerships with a view to selecting proposals geared to opening new fronts and developing new international cooperation projects. The objective of the PAPCI program, aimed at permanent members of both teaching and administrative staff, is to support international cooperation projects either by funding short visits to partner institutions abroad or hosting international visitors at UFMG, granting financial aid in the amount of up to R\$ 10,000.00 (ten thousand Brazilian Reals) for each approved proposal, based on assessment criteria according to the criteria which were previously specified in the Call. Thus, PAPCI offers the university community the possibility of prospecting new partnerships, either by bringing to UFMG foreign professionals with a relevant profile, or by sending staff abroad for work assignments that may generate new international partnerships. The good results of the PAPCI initiative

have ensured the continuity of the program. Another important action carried out by UFMG is the Franco-Brazilian Chairs Program at UFMG, which, together with the French Embassy, brings French visitors to UFMG. While the French Embassy is responsible for the costs of air travel, UFMG pays a monthly stipend to the French visiting professors to cover the cost of their stay. The good results of this initiative have guaranteed the continuity of the Franco-Brazilian Chairs Program at UFMG, which this year enters its fifth edition.

10. PARTNER COUNTRIES INVOLVED IN THE PROJECT

Argentina; Australia; Austria; Belgium; Canada; Chile; China; Denmark; Finland; France; Germany; Holland; Hong Kong; India; Ireland; Israel; Italy; Japan; Mexico; New Zealand; Norway; Russia; Singapura; South Africa; South Korea; Spain; Sweden; Switzerland; Turkey; United Kingdom; United States.

The above list of nominated countries is not exhaustive. Other partner countries can be added, respecting the limit of 70% of the overall funding being allocated to the 27 priority countries nominated by Capes.

Belo Horizonte, 27th May 2018
Office of the Pro Vice-Chancellor for Postgraduate Education
Universidade Federal de Minas Gerais (UFMG)