



Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

MINISTÈRE DE L'ÉCONOMIE
ET DES FINANCES



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MINISTÈRE
DE L'ENSEIGNEMENT
SUPÉRIEUR,
DE LA RECHERCHE
ET DE L'INNOVATION

Objectives and performance contract 2019-2023

Between the French government and Inria

This document outlines the constituent elements of the Inria Objectives and Performance Contract (COP) for the 2019-2023 period.

It is divided into three sections, dealing respectively with Inria's strategic objectives, the area policy for supporting the development of major research universities and a set of indicators for measuring impact.

There are appendices for each individual section, containing details on the priorities for each site, the milestones of this performance agreement and the target values for a specific number of indicators.

This Objectives and Performance Contract is in keeping with Inria's longstanding tradition, as summed up in the Institute's motto: "scientific excellence at the service of technology transfer and society". The starting point for this Objectives and Performance Contract is the end of a growth cycle driven by the conviction that digital technology can change the world, established 20 years ago by Bernard Larrousurou and Gilles Kahn (when the Institute grew from 5 to 8 centres) and continued by Michel Cosnard and Antoine Petit.

Now that the world has become digital and the academic landscape is being structured around major research universities, there is a need for a profound transformation of the Institute's ambitions, organisational structure and activity.

This Objectives and Performance Contract commits the Institute to a new cycle in which priority is given to impact, whether scientific, technological, economic or societal.

More than ever before, it is the ability to sustain the diverse organisational models of research in the digital sector that will enable us to generate that impact. This diversity must be fully embraced by everyone and Inria must do everything it can in order to be viewed by its partners as the operator of a portfolio of "project teams" surrounded by the support they need in order to ensure scientific excellence and economic impact, within and by means of the digital world, based in its research units at major research universities and in local innovation ecosystems. This should enable the Inria brand to become an asset, helping to amplify the global appeal and reach of all the university sites in which Inria operates.

- ➔ *To summarise, Inria's strategic ambition is to accelerate the process of establishing France's scientific, technological and industrial leadership, both in and by means of the digital world, within a broader European dynamic. Inria must fulfil its role in ensuring France's strategic autonomy and sovereignty in the digital sector (section 1). This ambition is based on consistency and synergy between its national policy and regional policy, fully committing Inria to the development of world-leading research universities within entrepreneurial and industrial ecosystems driven by digital technologies (Section 2).*
- ➔ *Inria must therefore demand impact in research and innovation, which must be measured using indicators (section 3) and demonstrated, and which may be a condition for allocating budgets.*

The French government and Inria agree to hold an annual review for the purposes of assessing the implementation of the measures outlined in this Objectives and Performance Contract and the initiatives contributing towards achieving its objectives. They will also hold a meeting in the months immediately following the enactment of France's multi-annual research programming law in order to assess the possibility of amending this contract by addenda allowing Inria to benefit from the new openings created by this law. Furthermore, new milestones may be introduced over the course of the Objectives and Performance Contract period, in addition to those outlined in this document.

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1/ Inria's strategic objective: to build scientific, technological and industrial leadership within and by means of the digital world, both in France and in Europe

Inria finds itself in a radically new context, at a time when society and the economy have become fully digital and are facing sizeable new challenges. This opens up new opportunities for the Institute, while also giving it new responsibilities in a fast-changing world.

“Digital” research is increasingly difficult to isolate due to its growing interdisciplinary importance as it evolves and permeates all aspects of life, with other centres of high-level expertise emerging or becoming stronger. Against this backdrop, it is more important than ever for a public research body such as Inria to assert its ambition of scientific excellence, not just in its core digital activities but also in its interdisciplinary work:

- to position itself at the new boundaries of research, aiming for a world-leading academic level,
- to draw its inspiration as much from industrial applications and partnerships as from the key challenges facing society,
- to promote risk-taking, whether scientific or entrepreneurial.

Above all else, Inria is a **human community**: an organisation of 2,600 people at the heart of an open, partnership-based ecosystem of 4,200 individuals (more than 50% of project team members are employed by Inria partners), acting as a driving force in the field of digital technology and innovation.

Inria also plays a key role in boosting the appeal of digital technologies, encouraging:

- young people to take up science and technology;
- students to go into research;
- young scientists (PhD students, research engineers) to pursue their research and/or create tech start-ups;
- researchers to stay in or move to France;
- French companies to invest in research and innovation in the digital sector in France;
- foreign companies to set up in France;
- SMEs and intermediate-sized companies to accelerate their expansion through digital technologies;
- citizens to act as responsible stakeholders in the sensible digital transformation of society;
- political decision-makers to invest in research and innovation.

Inria must also see itself as a **research and innovation body** in the digital sector, in which action is guided by the need for **impact**. This approach is based on Inria's original organisational model, that of the **project team**. These interdisciplinary project teams are created for a limited period of time and on the basis of a specific research and innovation road map, combining local and national dynamics and with a tried-and-tested evaluation process throughout their lifetime. This organisational model has been shown to be both reliable and effective in the context of digital research, helping to create the ideal circumstances for scientific risk-taking - by exploring new opportunities, primarily through interdisciplinarity (beyond mathematics/IT, two of Inria's core fields) - and entrepreneurial risk-taking (with the start-up mode acting as a key driver in the transfer process).

This model comes with a **set of services** specialising in the digital sector: a combination of bottom-up local dynamics and national initiatives mobilising numerous project teams, support for technology and software development, involvement in strategic partnerships with major industrial stakeholders, a European and international dimension with a strategic vision of digital dynamics across the world, and accelerating innovation by prioritising support for tech start-ups in the digital sector (deep tech) as a preferred method of driving technology transfer.

Inria is also an agile **organisation**, capable of building unusual objects quickly and “on demand”, some of which might be short-lived. Very often, this takes the form of partnerships, such as the European chapter of the *World Wide Web Consortium*, *Software Heritage* or *Class'Code*, a program designed to help schools teach digital technology.

It must be possible to measure Inria's **impact**, *the effectiveness of which will depend directly on how effective its original organisational model is*, using proven outcome indicators, either of research excellence (the number of ERC grants, for example) or economic impact (e.g. the number of digital deep tech start-ups launched or supported). Given Inria's partnership-based model, the results measured by these indicators should reflect the vitality of the research work being undertaken in the digital sector in France, through the CNRS, universities and engineering schools, and not just Inria's vitality alone.

Alongside other French research brands (such as the CNRS, or major intensive research universities), Inria is capable of **building a globally-significant French brand dedicated to the digital sector**, the collective goal being to raise France's profile and boost its appeal.

Based on its *Scientific Strategic Plan*, published in 2018, within four years, Inria should be capable of retrospectively demonstrating **major contributions to a number of scientific priorities**, whether previously planned (partly described below) or emerging during the term of this contract. In order to achieve this, **Inria will need to make choices**; the vitality of its scientific coordination tools and its capacity to conduct strategic dialogue with major partners, particularly in the industrial sector, will be a crucial part of this.

At the time of formalising this contract, Inria considers the following themes to be the priorities:

- digital security, including cryptography (in particular, post-quantum cryptography), formal methods applied to security and privacy, intrusion detection, the programming of the Internet of Things, etc.;
- “responsible AI”, encompassing a range of scientific themes, from algorithms and data processing chains to software certification;
- the links between high-performance computing and AI, algorithms and programming for the exascale machines of the future;
- quantum information and algorithms;
- major sectors, such as personalised medicine, precision agriculture, sustainable development and energy (including frugal digital) and lifelong learning.

More detailed descriptions of these themes can be found in the *Scientific Strategic Plan 2018*.

This ambition for global impact and these choices will be essential if the Institute is to maintain a long-term dynamics and remain attractive. Inria's partners and competitors in a scientific context are the major centres for academic research into digital technologies, such as MIT, Stanford or the Technion, to name just a few. Increasingly, they will also include the R&D centres of some of the digital-sector giants.

→ In order to achieve this ambition for scientific, technological, economic and societal impact, Inria's four closely-linked priorities will be as follows:

- 1.** To maintain scientific excellence;
- 2.** To increase the Institute's economic impact;
- 3.** To create an efficient and smooth-running organisational structure;
- 4.** To reinforce INRIA's contribution to public policy.

1.1 MAINTAIN SCIENTIFIC EXCELLENCE

Inria is a research institute with a versatile, project team¹ (PT) based model that encourages scientific risk-taking, primarily through interdisciplinarity and industrial partnerships, promoting the development of technology that is often central to scientific activity and supporting entrepreneurial initiatives.

Its scientific policy should concentrate resources on initiatives with national scope and strategic international partnerships, strengthening the Institute's position within the *European Research and Innovation Space*. Its policy for attractiveness and evaluation must be consistent with these priorities. In a wider sense, the way in which the portfolio of Inria project teams is coordinated must reflect Inria's strategy.

Inria's collective organisational structure must also enhance this versatility, drastically simplifying access to resources, especially internal, in order to enable the scientists working within its project teams to devote more time to scientific excellence and transfer efficiency, the goal being to maximise the Institute's impact.

MILESTONE 1 BETWEEN NOW AND JUNE 2020, INRIA WILL DETAIL THE CONTENT OF THE QUALITATIVE ANALYSIS REPORT ON ITS SCIENTIFIC IMPACT THAT IT WILL PRODUCE EACH YEAR.

1.1.1 Making the project-team creation process smoother and more efficient

The introduction of various rules over the years has stifled the agility of the creation process (around 18 months for creation), which, aside from anything else, has lost some of its meaning (a quarter of all units active within Inria are not PTs, but "centre teams",). The objective will be to significantly speed up the project-team creation process without affecting the quality of the initial work: it should take only a few months (4 months, as a rough guide) to set up a PT, with the Institute willing to take risks and to forego prior evaluation.

MILESTONE 2 IN THE FIRST HALF OF 2021, INRIA WILL PRESENT TO ITS BOARD OF DIRECTORS ALL ITS INTERNAL SUPPORT MECHANISMS, SPECIFICALLY HIGHLIGHTING THE SIMPLIFICATION MEASURES TAKEN AND THEIR IMPACT.

1.1.2 Promoting scientific risk-taking, primarily through interdisciplinarity and tackling major societal challenges

Inria must be capable of promoting the renewal of scientific themes and the emergence of new disciplines, with digital technologies playing a key role as a driver of interdisciplinarity. In order

¹ Everything is indicated in the 1994 Inria Strategic Plan, on page 11: "a research project, headed by a scientific manager, the project leader, has strong thematic unity, a work programme and medium-term objectives that are precise and known. An Inria project is not intended for the very long term and must undergo major changes in the medium term. Its scientific contribution must be clearly defined and its visibility international. Given the missions of the Institute, each project must have links with applications, and in particular in industry."

to meet this target, the Institute will develop an ambitious “exploratory initiatives”¹ programme, promoting interdisciplinarity and a tenfold increase, targeting - but not limiting the scope to - young researchers, with flexibility regarding the support format and the duration of the projects.

Nearly 15 years after Inria made its shift to focus on the health sector, other key subjects are beginning to emerge: the environment, energy, transport, agriculture, digital regulation and AI are all themes to which the Institute is capable of making major contributions. Inria must draw on the strength of its project-team model in order to make progress in these new areas, by strengthening its ties with public science and technology institutes such as INSERM or INRA, State-funded industrial and commercial establishments such as the IFPEN and the CEA, or administrative bodies such as the ARCEP or the CNIL. This may involve joint project teams being set up.

At the same time, the Institute must also ensure that scientific risk-taking and interdisciplinarity are encouraged through its internal evaluation processes, whether in terms of recruitment or for promotions (1.1.8).

MILESTONE 3 BEFORE THE END OF 2020, INRIA WILL RENEW ITS FRAMEWORK AGREEMENT WITH PUBLIC SCIENCE AND TECHNOLOGY INSTITUTES (EPSTS) (INSERM, FUTURE INRAE, ETC.) AND INDUSTRIAL AND COMMERCIAL PUBLIC ESTABLISHMENT (EPICS) (CEA, IFPEN, ETC.) TO INTRODUCE JOINT ARRANGEMENTS (PROJECT TEAMS AND SCHEMES TO FOSTER RESEARCH, SOFTWARE DEVELOPMENT AND THE CREATION OF START-UPS (DEEPTech), WITHIN THE FRAMEWORK OF INRIA'S APPLICATION PRIORITIES (DIGITAL HEALTH, PRECISION AGRICULTURE, ENERGY).

1.1.3 Boosting support for technological development

Technological development, the bulk of which is achieved through software, is central to the scientific work carried out by many PTs. Inria will continue to support and promote this work, prioritising PTs with solid technological foundations in order to ensure they are able to access the resources they need long-term.

The work carried out by the Experimentation and Development Department will be enhanced, targeted on supporting technological platforms shared among more than one project team, the dissemination of development culture, supporting young engineers and coordinating a community of engineers at Inria level. Within Inria's executive team for innovation, a hub dedicated to the strategic vision of Inria's technological platforms will be set up in order to support the Institute's primary technological projects, including its flagship software InriaSoft and infrastructure such as *Grid5000/Silecs*.

MILESTONE 4 DURING THE SECOND HALF OF 2020, INRIA WILL INCLUDE IN ITS PROCEDURES FOR CREATING AND RENEWING PROJECT TEAMS THE POSSIBILITY OF HAVING A DEVELOPMENT ENGINEER WHO IS ASSIGNED TO THE TEAM FOR THE DURATION (4 YEARS, AS A GUIDELINE).

¹ In 2018, the ratio of the number of exploratory initiatives (2 to 3 for Inria as a whole) to the number of PTs was around 1%.

1.1.4 Boosting the impact of incentives, with decisions taken at the appropriate level

Over the years, Inria has developed a range of incentive systems, with decision-making processes at a national level. **Although decision-making at national level is justified, e.g. for initiatives in which a number of centres are involved (whether for digital infrastructure or for national research projects involving more than one project team, such as Inria Project Labs)**, decision making within an individual centre is likely to be more efficient for support that is limited to a single project team.

The support resources available to individual teams for technological development (excluding start-up creation) and international partnerships with limited scope (1.1.6) will be decentralised, with responsibility given to centres. This change will make it possible to consolidate the available tools, enhancing impact and helping to prevent any one-stop-shop effects: only a research centre is capable of monitoring the consistency of all of the support provided to one of the centre's project teams.

In addition to this transfer of responsibility towards research centres, changes will also be made to national directorates, including the General Directorate for Science, which will concentrate on its strategic dimension: scientific forecasting, upstream support for centres in the evaluation of opportunities, consolidation at a national level, remaining consistent with the Institute's broader strategy ("scientific excellence and transfer") and retrospectively assessing the impact of programmes overall (rather than for each project being supported). Running parallel to this, changes will also be made to the centres themselves, which will need to be able to explain and evaluate their "investment" choices better with regard to the Institute's national policy and their position within their ecosystem.

At the interface with its scientific strategy (including new imperatives linked to artificial intelligence), Inria must outline a clearly-defined policy for computing resources, simultaneously addressing the specific needs of the project teams in the centres (all of which will have computing clusters) while meeting the multi-annual investment vision and remaining consistent with the resources available at both a national (GENCI, CINES and IDRIS) and regional level (HPC clusters, data centres, etc.). This policy must specify the operating and support conditions for project teams, how they will correspond with the technological platforms operated by Inria's Experimentation and Development Department and the level of involvement in area policies.

MILESTONE 5 DURING THE FIRST QUARTER OF 2020, INRIA WILL PRESENT TO ITS BOARD OF DIRECTORS A POLICY ON ITS COMPUTING RESOURCES, IN LINE WITH ITS NATIONAL DIMENSION AND ITS SITE POLICY.

1.1.5 Strengthening Inria's European ambitions

When it comes to EU programmes for supporting research, Inria stands out by its good performance for the ERC, but a significant weakening in its position in other calls for projects, with little project coordination. Over the course of the contract term, Inria will have stronger ambitions at a European level in line with the "*National Plan for Improving French Participation in European Initiatives for Funding Research and Innovation*". This will require the Institute to maintain its efforts with the ERC and make a significant effort for all other EU programmes of interest to Inria (collaborative projects, *Digital Europe*, *EIC*).

The Institute will put in the necessary resources to achieve this ambition:

- The priority themes raised at a European level must feed into the Institute's scientific strategy.
- The European Partnerships Department (DPE) must carry out a detailed assessment of all EU programmes of interest to Inria and, in a more general sense, all programmes relevant to public research in the digital sector, including the "Digital Europe" and "EIC" programmes: this will involve setting up a monitoring and lobbying unit in Brussels, the production of which will be shared with Inria's academic partners and which will be kept consistent with French schemes in the field (*Clora*, the "Maison de la Science Française" project, etc.)
- The support teams for EU projects must be significantly strengthened and identified as such, both within centres and at a national level, through the creation of a European Contracts Department on the same level as Inria's executive team for innovation.
- Specific incentives must be directed to PTs taking on an EU project coordination role.

Among the strategic partnerships to be built (1.1.6), priority will be given to Franco-German initiatives, in keeping with the Institute's transfer policy and its emphasis on supporting French stakeholders (1.2.2). The themes that have been identified include cyber security, primarily through the Nancy-Grand Est centre's cross border partnerships, and artificial intelligence, through a partnership with the DFKI and the most visible Max Planck Institutes (such as Tübingen, Saarbrücken and Munich).

MILESTONE 6 DURING THE FIRST HALF OF 2020, INRIA WILL SET UP A MONITORING UNIT IN BRUSSELS DEDICATED TO DIGITAL TECHNOLOGY, WHICH TIES IN WITH OTHER FRENCH INITIATIVES ON THE SAME SUBJECT (*CLORA*, PLANS FOR A "FRENCH SCIENCE CENTRE", ETC.) AND WHERE THE WORK WILL BE SHARED WITH ITS PARTNERS UNDER ITS AREA POLICY.

MILESTONE 7 DURING THE SECOND HALF OF 2020, INRIA WILL SIGN A STRATEGIC PARTNERSHIP WITH PLAYERS FROM GERMAN ACADEMIA (FIRST AND FOREMOST THE DFKI) WITHIN THE FRAMEWORK OF THE FRENCH-GERMAN STRATEGY ON AI.

1.1.6 Concentrating on certain strategic partnerships at an international level

Given its project-team organisational structure, Inria is naturally inclined towards building a retrospective international strategy by consolidating individual strategies for project teams. The support given, where appropriate, to project teams for their international projects must be maintained through the programme for associate teams, which has been proven to be effective; clearly, this support must be provided within the context of France's international strategy and the constraints applicable to the Institute, e.g. on the protection of scientific and technological heritage (1.3.2).

Nevertheless, this strategy must also include a more substantial share of activity in major strategic partnerships, for which the Institute will bear responsibility. Inria must focus its international activity on a restricted number (between 5 and 10, as a guide) of major strategic partnerships. Agreements with these partners must be concluded with a genuine operational dimension (arrangements and resources) and with the aim of cementing Inria's reputation as a global brand.

Building these strategic partnerships, based on scientific, industrial and even diplomatic criteria (through closer ties with the digital diplomacy conducted by the French Ministry for Foreign Affairs), in collaboration with a talent attraction policy, will be the priority of the new Directorate for International Relations (DRI).

MILESTONE 8 DURING THE FIRST HALF OF 2020, INRIA WILL PRESENT ITS BOARD OF DIRECTORS WITH ITS POLICY ON STRATEGIC INTERNATIONAL PARTNERSHIPS, WITH A FIRST LIST OF THESE PARTNERS.

1.1.7 Boosting Inria's appeal in order to maintain high-quality scientific recruitment

The Institute must continue to recruit scientists of the very highest level, pursuing its policy of heavily recruiting foreign researchers, within the context of a French national attractiveness policy. The setting up of a standing "Search Committee" will provide one way of enhancing this appeal.

Inria must use all of the remuneration options at its disposal in order to improve remunerations for researchers, in the context of a global brain drain. The recent creation of a "*Young Research Recruit*" bonus is part of this. More specifically, Inria will use the options available in terms of extending incentive schemes, the opportunities opened up by the *French PACTE law* for stimulating mobility between public and private bodies, and the opportunities that will be opened up by France's multiannual research programming law in order to diversify the recruitment channels for young researchers, in addition to the competitive exam for recruiting researchers and directors of research, which will be reinforced. This will include implementation tailored to fit the French context of "tenure tracks", jointly setting up an "*Inria Starting Faculty Position*" with the Institute's university partners (Section 2). This will be based on the Starting Research Positions Inria has developed over the past decade, feedback for which will be delivered between now and the end of 2019. The relevant implementation methods will be discussed in detail with Inria's collective bodies, while the programme will be assessed halfway through the performance agreement period, with a particular focus on appeal and scientific quality.

Inria will also introduce a specific program to give all new Inria researchers, primarily young researchers, a welcome package, helping them to meet their scientific ambitions from the moment they first join Inria. The contents of this welcome pack are still to be determined, but will be consistent with the activity of the project team the researcher has joined.

The Institute's flexibility and its capacity to tackle contemporary societal and technological issues will be another key aspect of its appeal in the eyes of a generation of young researchers aspiring to build a sustainable society and to give more meaning both to their research and to their commitment.

MILESTONE 9 IN 2020, INRIA WILL PRESENT ITS BOARD OF DIRECTORS WITH A "WELCOME PACKAGE" TO BE GIVEN TO THE YOUNG SCIENTISTS IT RECRUITS, STARTING WITH THE 2021 CAMPAIGN.

MILESTONE 10 IN 2020, INRIA WILL PRESENT ITS BOARD OF DIRECTORS WITH A NEW PAY SCALE TAKING ACCOUNT OF "FUNCTIONS, CONSTRAINTS, EXPERTISE AND PROFESSIONAL COMMITMENT" (RIFSEEP) FOR ITS RESEARCH STAFF.

MILESTONE 11 DURING THE FIRST HALF OF 2020, INRIA WILL SET UP A PERMANENT "SEARCH COMMITTEE" TO ENHANCE ITS INTERNATIONAL APPEAL ON SUBJECTS IDENTIFIED AS STRATEGIC.

MILESTONE 12 IN 2020, INRIA WILL LAUNCH A PROGRAMME ENTITLED "INRIA STARTING FACULTY POSITION", BASED ON ITS EXISTING STARTING RESEARCH POSITION (SRP) SCHEME, AS PART OF ITS SITE POLICY, JOINTLY WITH ITS MAJOR UNIVERSITY PARTNERS, WHICH WILL BE FOLLOWED UP THE YEAR AFTER WITH AN EVALUATION OF ITS INITIAL RESULTS.

1.1.8 Ensuring the establishment policy is taken into account in the evaluation processes

In order for Inria to meet its goals, it is essential for there to be consistency between the evaluation principles and practises on one hand, and the Institution's policy on the other hand. In this context, the process of evaluating project teams and, most importantly, researchers, must be better equipped to take into account all dimensions of Inria's activity and the expected contributions; not just scientific excellence, but also risk-taking and interdisciplinarity (1.1.2), involvement in EU projects (1.1.5) or strategic international partnerships (1.1.6), in technological development (1.1.3) and dissemination, in creating or supporting start-ups or in industrial partnerships (1.2.*), and involvement in collective or managerial functions, or functions serving public policy (1.3.*, 1.4.*).

The evaluation file for each researcher applying for a promotion, for example, will include in the preface an opening declaration outlining the areas in which their main contributions have been made, in the context of various research assignments, thus ensuring that the evaluation takes all of these dimensions into account. Based on what is currently in place, Inria's evaluation committee will specify criteria enabling them to better incorporate these various dimensions into the process of appropriately evaluating candidates' careers.

A proposal will be put to Inria's evaluation committee to begin working on these subjects from 2020 onwards in order to meet the following two milestones.

MILESTONE 13 AN UPGRADED VERSION OF THE PROJECT TEAM EVALUATION PROCESS, PROPOSED BY THE *INRIA EVALUATION COMMITTEE*, WILL BE PRESENTED TO THE BOARD OF DIRECTORS AND THEN TO THE HCERES FOR VALIDATION.

MILESTONE 14 MEASURES ENABLING BETTER ACCOUNT TO BE TAKEN OF RISK-TAKING AND THE DIVERSITY OF ACTIVITIES AND CAREERS WHEN EVALUATING RESEARCHERS WILL BE IMPLEMENTED AFTER CONSULTATION WITH THE *INRIA EVALUATION COMMITTEE*.

1.2 TO INCREASE INRIA'S ECONOMIC IMPACT

With an elite scientific base, the Institute has always felt that there were many ways of measuring the impact of research, ranging from scientific outreach to the men and women who pass through the Institute on their way to joining other organisations.

Economic impact is also increasingly common, taking various different forms: the dissemination of open source software providing technological infrastructure to innovative companies, for example, or involvement in standardisation activities.

Such an economic impact will be essential in order to contribute to the revitalisation and sustainability of France and Europe's industrial base in the digital sector. This objective will enable Inria to pursue its strategy geared towards the creation of tech start-ups. Owing to the long-term nature of a tech start-up, the lifespan of which will often exceed that of a project team, this will be a long-term policy. It will also help avoid the trap of service provision, which is not one of Inria's purposes: the Institute has no vocation to become an incremental research institute and even less to become a purveyor of services that the private sector could provide.

1.2.1 *Scaling up for the creation of tech start-ups*

In the digital sector, a start-up project is primarily a means of conducting a project by exploring dimensions outside R&D, whether this is in terms of understanding the needs of users or potential clients, putting in place a marketing strategy or accessing funding for the commercial roll-out of products or services based on these technologies. The actual impact of software technology, which undergoes significant changes when it leaves the world of research, will depend on the presence of talented individuals: digital start-ups make it possible to link these "plastic" technologies with skills, thus helping to bring about these changes. For these reasons, start-up projects are a potent way to transfer technology in the digital sector, and Inria will make increasing the creation of tech start-ups a priority when it comes to its transfer policy.

Inria will implement a comprehensive, end-to-end system for scaling up in the creation of tech start-ups beginning life primarily within its research teams, including those led by young scientists or, more generally, promising talent "passing through" Inria (PhD students, postdoc researchers, engineers, entrepreneurs in residence).

This end-to-end system will include:

- a specific appeal policy ("before launching a (real) start-up, come and do a PhD at Inria"), targeted primarily at engineering schools or universities with strong commitments to policies promoting entrepreneurship;
- awareness-raising and training schemes, targeted primarily at this same group, based on initiatives currently in place at Inria and working in conjunction with its partners;
- a programme for the co-design of entrepreneurial projects ("*Inria Startup Studio*"), scaling up the expertise of *IT-Translation*;
- enhanced contacts with French and European funding stakeholders (including *Bpifrance* and venture capital funds with an interest in deep tech);
- the capacity to support the international ambition of start-ups through a network of partners, including stepping up the Institute's involvement in the *EIT Digital* and the *EIT Health*.

This Inria initiative will take into account the specific nature of digital start-ups. It will be adapted to suit local contexts and will be open to Inria's academic partners through the Institute's site policy (Section 2). This will be in keeping with the deep tech plan of *Bpifrance*, with whom a framework agreement was signed in July 2019.

Involvement in French Tech Central and the partnership with French Tech will also be part of this.

Inria will pursue its engagement vis-a-vis venture capital funds, through subscriptions taken out *via* its Inria-Participations subsidiary, in order to maintain its expertise in technology seed funds and its legitimacy when it comes to funding tech start-ups.

Finally, the regional *InriaTech* projects will take place within the context of this policy. They will be tailored in order to coordinate all of the technological transfer initiatives by explicitly prioritising tech start-ups as a means of transferring technology, whether these are start-ups yet to be created (either internally or externally) or existing start-ups. SMEs and intermediate-sized companies looking to expand are now turning towards tech start-ups, which are capable of providing a more complete technological solution than a research institute would be able to.

MILESTONE 15 *INRIA STARTUP STUDIO WILL BE SET UP IN PRACTICE ON ALL THE SITES WHERE INRIA IS PRESENT, UNDER THE AGREEMENT WITH BPIFRANCE AND THE SITE POLICY. THE SCHEME WILL BE PRESENTED IN DETAIL TO THE INRIA BOARD, WITH DEVELOPMENT SCENARIOS TO ENSURE ITS FINANCIAL SUSTAINABILITY.*

1.2.2 Prioritising bilateral agreements with industrial partners in France and with companies building an employment base in France and more broadly in Europe

In the targeted sectors, Inria will re-establish a policy of strategic bilateral agreements on long-term shared commitments with major French industrial partners and, by extension, with companies with a track record of creating jobs both in France and elsewhere in Europe. These agreements, which do not include any indirect assistance for manufacturers in accordance with the applicable regulations governing state aid, will be entered into on the basis of a shared road map with the possibility of involving Inria project teams. A strategic but flexible governance structure will also be set up to address shared objectives.

New arrangements, including the setting up of joint start-up incubators, will be considered (similar to the visionary work Inria did with Bull more than 20 years ago *via Dyade*). In much the same way, the bulk of the national projects supported by Inria (including "*Inria Project Labs*", which will be renamed "*Inria Challenges*" in this context) will be jointly put together with these partners in order to tackle full-scale subjects and to have access to the relevant data sets. The setting up of joint project teams with companies having adopted the Inria model will also be promoted.

Partnerships with SMEs and intermediate-sized companies will also be based on joint laboratories, set up using shared R&D road maps (the Inria Innovation Lab programme, a precursor to the French National Research Agency's Labcom programme). This method will be preferred to the service provision concept, which does not fall within the allotted scope.

1.2.3 Providing on-going training in digital technology

Inria will provide on-going training in digital technology, targeted primarily at companies developing an employment base in France and elsewhere in Europe. This will be based around open source software made available by Inria, with support from the *Inria Learning Lab* for the production of online courses.

The functioning of this training provision will be tested internally prior to being rolled out in order to assess various upscaling scenarios, including the creation of a dedicated subsidiary, potentially in partnership with public or private stakeholders. This training provision will also be part of Inria's site policy (Section 2).

MILESTONE 16 DURING THE SECOND HALF OF 2020, INRIA WILL SET UP AN ON-GOING TRAINING SCHEME, WHICH MAY AT A LATER STAGE GIVE RISE TO A PLAN FOR A SUBSIDIARY, WHICH WILL BE PUT FORWARD FOR THE BOARD'S APPROVAL.

1.2.4 Incorporating ambitious economic impact objectives into certain international projects

An explicit commitment to seek economic impact is to be incorporated into a number of international projects.

This will include projects relating to standardisation, primarily in a European context, covering themes such as artificial intelligence or the future of the Web.

Inria, with support from its line ministries and in conjunction with its academic and industrial partners at both a French and European level, will build a structural framework for this type of project on themes relating to artificial intelligence.

In light of the changes made to the *World Wide Web Consortium* (the creation of a legal entity in the USA), preserving a significant level of European involvement must be made a priority. The development of the *ERCIM*, which is currently the European host of the *World Wide Web Consortium*, must be looked at in a European context, in support of a number of major economic sectors both in France and elsewhere in Europe for whom the question of the Web's open standards, particularly the semantic Web in the context of the development of artificial intelligence, is crucial. Among the potential scenarios, the possibility of setting up a legal entity in Europe will be discussed, in addition to potential synergies with European standards bodies.

Inria's investment in Inria Chile, whose positioning with regard to transfer has been clarified with the relevant partners in Chile, is to be continued, with a number of changes to be made in the context of the new funding phase for 2019-2022 for Inria Chile by Chile's Minister for the Economy:

- to ensure that all Inria Chile activity is in keeping with Inria's strategy;
- to ensure that Inria Chile is better coordinated with the work of industrial partners in France and elsewhere in Europe;
- to use Chile as a staging post for South America;
- to build a sustainable funding model for Inria Chile.

MILESTONE 17 DURING THE FIRST HALF OF 2020, INRIA, WITH ITS EUROPEAN PARTNERS, WILL PUT A PROPOSITION FOR THE DEVELOPMENT OF THE EUROPEAN HUB OF THE *WORLD WIDE WEB CONSORTIUM* BEFORE THE EUROPEAN COMMISSION. IT WILL ALSO PRESENT TO ITS BOARD OF DIRECTORS ITS STRATEGY IN RELATION TO STANDARDISATION.

MILESTONE 18 IN 2022, INRIA WILL PRESENT TO ITS BOARD OF DIRECTORS A SUSTAINABLE STRATEGIC DEVELOPMENT SCENARIO FOR INRIA CHILE, DEVISED JOINTLY WITH ITS CHILEAN PARTNERS, FIRST AND FOREMOST *CORFO*.

1.3 TO CREATE AN EFFICIENT AND SMOOTH-RUNNING ORGANISATIONAL STRUCTURE

In order to meet its ambitions, Inria must have an organisational structure that is efficient, and which runs smoothly, capable of getting staff on-board and ensuring the effectiveness of the work carried out in support roles. These form the backbone of the Institute and must be valued accordingly. Of course, Inria is also a research and innovation organisation, that relies on support services, enabling researchers and engineers, whether present long-term or only temporarily, to work as effectively as possible.

1.3.1 Strengthening the sense of belonging to the Institute and improving cooperation

Inria must ensure that everyone is aware of what Inria is and of the specific place the Institute occupies within the research and innovation ecosystem. Many individuals working within project teams are not employed by Inria, while many Inria employees spend only short periods of time (ranging from a few months to several years) within the Institute. As such, it is essential to develop a clear programme of actions, both internally and externally (through Inria Alumni, for example), to strengthen the sense of belonging to the Institute, without this in any way contradicting the site policy (Section 2). More specifically, special “graduating classes” of PhD students and project coordinators will be identified, with each given a name and a sponsor.

This feeling of belonging can also be boosted by better cooperation in day-to-day operations, with a greater degree of cross-functionality between departments and more productive exchanges between centres and departments in the context of the shared ambition outlined in the performance agreement. One of the drivers for action in this field is the changing nature of the role of Centre Admin Delegates, who will become Centre General Secretaries, overseen by the directors of the research centres. They will have hierarchical responsibility over administration departments, with collective activities coordinated by the Centre's Head of Administration.

MILESTONE 19 FROM 2020 ONWARDS, WILL PLACE GREATER VALUE IN PARTICULAR ON THE ANNUAL RECRUITMENT OF PHD STUDENTS INTO ITS PROJECT TEAMS AND THOSE WITH AN ENTREPRENEURIAL PROJECT, AND WILL SET UP A SPECIFIC EVENT (APPOINTMENT, SPONSORSHIP, ETC.).

1.3.2 Developing an organisation with a culture of responsibility, ensuring compliance with legal, regulatory and ethical frameworks and social and environmental responsibility

Inria is an organisation that promotes and supports scientific and entrepreneurial risk-taking. However, the Institute must pay greater attention to developing a culture of responsibility, with a strong focus on ethics.

The recently-created Legal Affairs Department is part of this and its scope is set to be extended, particularly at centre level. Among the factors contributing towards the development of a culture of responsibility, Inria must establish a code of ethics similar to those adopted by major internationally-renowned institutions.

Similarly, the Operational Committee for the Assessment of Legal and Ethical Risks will continue to operate, with the necessary resources allocated and steps taken to ensure that follow-up on recommendations takes place. Inria will also develop a code of ethics in which it will reaffirm the collective and managerial values, to which the staff will adhere and which they will commit to promoting through their actions. The Institute will continue with its current training and awareness-raising schemes on the subject of ethics and research integrity. It will set up a transparent procedure for responding to instances where research integrity that complies with industry best practice has been found to be lacking. In a more general sense, it will make a commitment to promoting an environment that is conducive to research integrity, chiefly through the development of open science (1.4.4), laying the groundwork for honest, reproducible science.

The Institute will also prioritise the information system security policy (to be incorporated into a wider security initiative) and the data protection policy, which is compatible with the new regulatory frameworks (with the impact of the GDPR). The same level of attention will be paid to protecting scientific and technical potential.

Lastly, an internal unit will be set up in order to promote actions relating to social and environmental responsibility, such as reducing the Institute's carbon footprint, and, in a more general sense, responsible scientific practise that is in keeping with societal aspirations for sustainable development.

MILESTONE 20 EACH YEAR FROM 2020 ONWARDS, INRIA WILL PRESENT TO ITS BOARD OF DIRECTORS THE ACTIONS IT HAS TAKEN TO REDUCE ITS CARBON FOOTPRINT.

1.3.3 Improving working conditions and strengthening a social policy that promotes equality, taking disabilities into account and fighting discrimination and both sexual and psychological harassment

Inria was the first research organisation to introduce teleworking and to measure quality of life at work using a social barometer. Nevertheless, the *Optin* project, the concept of which was abandoned by Inria in 2018, led to a genuine sense of social unease and a rise in occupational stress. Inria will develop prevention and the monitoring of measures implemented in the context of the annual prevention programme, at both a national and a local level.

Particular attention will also be paid to changes made to jobs and internal entities by generalising prior impact studies so as to involve all persons concerned and to anticipate the appropriate action to take, in addition to putting in place any support that might be required.

Given the significant rise in remote working within the Institute (individuals operating in research centres with remote management), Inria will put in place initiatives aimed at tackling new issues raised by this type of work, which can be destabilising for the individuals involved. The Institute, which was the first public science and technology institute to introduce teleworking, will roll out a new version of its remote working charter.

Inria will also commit to implementing measures, whether internally or through its foundation, promoting equal opportunities. Part of this will involve drawing on the work carried out by the equality commission. Inria will make it a priority to encourage young women to take up careers in science and technology, to pay greater attention to promoting women within the Institute and to give women increased responsibility. A greater emphasis will also be placed on initiatives relating to tackling harassment in all its forms, with the Institute paying this issue the utmost attention.

Lastly, Inria will build and implement an ambitious plan for persons with disabilities, moving towards the regulatory requirement to have 6% of the workforce made up of persons with disabilities through appropriate actions (including digital accessibility).

1.3.4 Developing a local HR policy, centred around supporting changes affecting professional functions, developing a shared managerial culture and long-term employment management

Inria will adopt a genuine medium-term vision (5 years) for changes affecting professional functions, with regard most notably to the digital transformation of the Institute (1.3.6).

In this context, the decentralised Human Resources departments will once again occupy an important role, developing a close at hand support policy that does not only concern personnel working within its project teams (including those with fixed-term contracts) but also personnel from all departments. Significant measures to provide training and support to new recruits will be introduced, this being one of the Institute's current weaknesses. This will also concern new project team leaders, with attention paid to the Institute's social policy (1.3.3) and culture of responsibility. More specifically, project team leaders will be given an HR evaluation prior to their nomination, with particular emphasis placed on managerial aspects during the evaluation process (1.1.8).

Feedback will be provided on the Management School, leading to a revised version being introduced, in the context of a more strategic vision for the Institute's HR policy and greater attention being paid to the support given to managers. Furthermore, a programme for identifying future Inria executives will also be set up, building pathways internally and, most importantly, external to Inria, primarily for individuals called upon to take up roles within the management board.

The organisational structure for roles and jobs, currently restricted to departments, will be subject to transparent modification, taking into account the heterogeneous nature of centres and a desire to capitalise on sustainable support functions. As such, the short-term fixed-term contract policy will be halted for assignments judged as being lasting and critical to Inria. Furthermore, the jobs forecast will be extended in a way that is suited to the scientific population in order to better anticipate recruitment, promotions and researcher competitive examinations. This will be part of a global process of long-term management for staff, jobs and skills, with additional support from the new Human Resources Information System.

In a general sense, Inria's HR policy will be consistent with the commitments made in the context of the *HRS4R* labelling obtained by the Institute.

MILESTONE 21 EACH YEAR FROM 2020 ONWARDS, INRIA WILL PRESENT TO ITS BOARD OF DIRECTORS THE ACTIONS IT HAS TAKEN AS PART OF ITS POLICY OF ATTRACTING NEW TALENT, ITS DISABILITY PLAN AND TO REINFORCE MANAGEMENT CULTURE WITHIN THE INSTITUTE.

MILESTONE 22 FROM 2021 ONWARDS, INRIA WILL PRESENT AN ANNUAL PROGRESS REPORT ON THE SETTING UP OF GLOBAL PROJECTED MANAGEMENT OF JOBS AND SKILLS (PMJS) SYSTEM.

1.3.5 Strengthening the contribution made by our collective bodies to the strategic choices made by the Institute

The board of directors (within which key strategic issues are discussed and approved), the management board (responsible for fostering management solidarity and ensuring that management acts collectively), the evaluation committee (which must remain a strong body, holding clear dialogue with management), the scientific council (whose impact on the life of the Institute must be revitalised), the project team committees for each centre (for whom decentralisation of resources will restore impact capacity) and, more generally, the relevant collective bodies, are all assets enabling Inria to achieve its aims.

By way of an illustration, the scientific council and the evaluation committee will both be given a greater role with regard to forward-planning, drawing partly on the vital work carried out by the monitoring committee, the activities of which have just been brought to a halt in this context.

The bodies participating in the Institute's social policy (Inria's technical committee and both the local and national health, safety and working conditions committees) will be given an expanded role in the context of an enhanced social dialogue.

MILESTONE 23 EACH YEAR FROM 2021 ONWARDS, INRIA WILL PRESENT TO ITS BOARD OF DIRECTORS THE FORWARD PLANNING WORK UNDERTAKEN JOINTLY WITH ITS COLLECTIVE BODIES (IN PARTICULAR THE SCIENTIFIC COUNCIL AND THE EVALUATION COMMITTEE).

1.3.6 Successfully bringing about Inria's digital transformation

Inria's information systems will be recognised as being of strategic importance for the Institute, coordinated at management board level. A single Information Systems Department has just been set up, whose ambition must be to successfully bring about Inria's digital transformation, one of the priorities of this performance agreement. It must be Inria's ambition to become the leading public body when it comes to digital transformation. The aim of this organisational evolution is to ensure that researchers receive the same (or better) level of service, including in centres where services shared with UMRs are in place (Nancy and Rennes) and, as a priority, to ensure that there is a significant improvement in the software used in support roles. This should open up career development opportunities for personnel working within the information systems department. This evolution will set an example when it comes to listening to personnel and its capacity for flexible response based on continuous feedback.

Running parallel to this, a genuine BI system (something Inria is currently lacking) based on data will be rolled out, with the process of tracking indicators for monitoring activity and operational conduct shared between all Inria stakeholders (separate from the performance indicators outlined within this performance agreement). This will build on Inria's activity monitoring centre, making it possible to roll out control indicators at a local level.

MILESTONE 24 EACH YEAR FROM 2020 ONWARDS, INRIA WILL PRESENT TO ITS BOARD OF DIRECTORS THE ACTIONS TAKEN AS PART OF ITS DIGITAL TRANSFORMATION, INCLUDING THE SETTING UP OF A BI SYSTEM TO ENABLE MORE EFFECTIVE RUNNING OF THE INSTITUTE, IN PARTICULAR WITH RESPECT TO ITS RESEARCH AND INNOVATION POLICY.

1.3.7 Developing a culture of collaborative innovation within the Institute

The feeling of belonging, initiative-taking and individual responsibility will be prioritised through the setting up of a framework conducive to collaborative innovation. This framework will enable any individual Inria staff member to put forward ideas for improving the way in which the Institute operates and to convert these ideas into projects, adopting an incubator approach, through trained points of contact, in addition to presenting these projects to managers within the Institute, irrespective of their level, in order to assess the potential benefits of investing time and money in these projects.

1.3.8 Devising and implementing a significant multiannual property plan

In 2019, Inria will present a comprehensive property plan in order to prioritise a range of significant property operations (the previous period having seen a low number of operations): the future of the headquarters in Rocquencourt, which has been brought into question as a potential candidate for relocation; the property project for the Paris centre; the project involving the Grenoble Rhône-Alpes centre potentially joining the campus of the Université Grenoble Alpes; the potential involvement of the Saclay centre in the Digihali project; the renovation project for the Sophia Antipolis - Méditerranée centre site (a number of possible options); and the consequences of the possible creation of a centre in Lyon illustrate just what is at stake, with these issues also forming part of Inria's site policy (Section 2). This document constitutes the basic outline of Inria's multi-annual property plan (SPSI), which will be compiled no later than 2020.

Partnerships enabling Inria to see this property plan through to its conclusion will be explored, including with stakeholders such as the *Caisse des Dépôts et des Consignations* and its subsidiaries. Moving towards a property model that is more open with regard to its ecosystem, particularly from an entrepreneurial and industrial perspective, and consistent with a partnership-based policy for research and innovation will be a key part of this policy. The possibilities opened up through the rolling out of the *Sociétés Universitaires et de Recherche* program will also be explored.

MILESTONE 25 IN 2020, INRIA WILL PRESENT ITS BOARD OF DIRECTORS WITH A FINANCE PLAN FOR ITS PROPERTY PLAN.

1.3.9 Building a funding trajectory helping to meet the objectives of the Objectives and Performance Contract

From a financial perspective, Inria's room for manoeuvre has been significantly reduced over the years.

On top of discussions held with supervising ministries on the basis of a new project for Inria, focused on impact, and a possible increase in specific resources (particularly those linked to EU funding), Inria must also seek to clearly position the Inria Partnership Foundation as a versatile tool for sourcing sponsors (without any recompense on their part) in order to support Inria's ambition, and for opening up to civil society. Inria's strength as a brand should make it possible to build dedicated programmes in receipt of sponsored funding given their importance:¹ initiatives aimed at promoting risk-taking in research and interdisciplinarity, developing entrepreneurial culture and software development (in keeping with the specifics of the software PI), theme-based programmes dealing specifically with the digital transformation of education (EdTech) and disabilities, promoting equal opportunities, and the dissemination of scientific and technological culture (1.4.3) will in theory be the first candidates when it comes to building a portfolio of actions for the *Inria Foundation*.

¹ The motto chosen by the Foundation in 2019 is "*Making sense of the digital world*".

1.4 REINFORCE INRIA'S CONTRIBUTION TO PUBLIC POLICY

The emergence of major research universities operating at the top level internationally is central to public policies in higher education, research and innovation. Inria, practically all of whose research centres are partners of universities selected as *Idex* or *Isite*, is directly involved in this dynamic. On this basis, the Institute is set to increase its involvement with its university partners, contributing towards the drafting and implementation of a dynamic site policy tailored to suit each individual situation.

A detailed description of this site policy can be found in Section 2. This will require genuine strategic dialogue and the capacity to identify channels for each site that will make it possible to strengthen, simplify and integrate existing plans, such as those regarding innovations, relations with regional stakeholders, appeal or identification within international rankings. This will also include the possibility of experimenting with initiatives in other fields, such as increasing researcher participation in teaching and its organisation, including in the context of the opportunities opened up by the creation of the *Écoles Universitaires de Recherche*, French-style graduate schools.

More generally, the Institute must also begin to see itself as a tool for supporting public policies: enhancing the impact of the work carried out by the *Allistène* alliance, the positioning for which still has to be determined; coordinating national plans (including the research component of the artificial intelligence plan, for example), expanding scientific outreach initiatives and links with France's Ministry for National Education; the strategic priority given to the closer ties being developed with France's Ministry for the Armed Forces and national security bodies; and participation in the national plan for open science can all be thought of in this context. Other public policies may also be of relevance.

1.4.1 Targeting and enhancing the impact of the work carried out by the *Allistène* alliance

Alongside its partners, the portfolio of the *Allistène* alliance will be assessed in order to give priority to collective actions capable of making a significant impact. In that regard, the changes to be made to the strategic role of the CERN ethics committee, with a digital ethics committee to be incubated by the National Advisory Committee on Ethics, will be supported by Inria. The possibility of sharing initiatives targeted at Europe, within the context of a coordinated approach, will also be explored. More generally, Inria will examine all measures initiated by the Institute to determine which of these could potentially be shared within the alliance.

MILESTONE 26	FROM 2020 ONWARDS, INRIA WILL TAKE PART IN THE WORK ENTRUSTED TO THE CCNE (NATIONAL ETHICS ADVISORY COUNCIL) ON THE SETTING UP OF A DIGITAL ETHICS COMMITTEE.
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1.4.2 Coordinating the research component of the National Artificial Intelligence Plan

In 2018, the French government gave Inria a new type of responsibility, tasking the Institute with the coordination of the research component of the National AI Plan. Inria will bear full responsibility for this assignment - which will be of benefit to the whole of France's digital innovation and research ecosystem - through the coordination activity set up within Inria, the purpose of which is to ensure that this role is kept separate from Inria's own research activities. Particular attention will be paid to ensuring that the work undertaken as part of this assignment is consistent with the policies introduced by Inria.

This work, which will be closely coordinated with the Institute's supervising ministries (through the DGRI and the DGE) will include:

- support for the drawing up of calls for projects;
- forming a network of *3IA institutes*, with a light approach so as to avoid taking the place of individual establishments' policies;
- supporting international initiatives relating to artificial intelligence;
- the possible development of shared infrastructure;
- participating in the process of defining an appropriate policy for computational resources for AI;
- participating in discussions on the subject of ethics in artificial intelligence;
- links with other public initiatives designed to have an economic impact.

Inria will give a more prominent role to the *TransAlgo* platform, which deals in the transparency of algorithms, coordinating it with the artificial intelligence plan and ensuring it develops in a way that is in keeping with the work carried out by the DGE (Digital Economy) with regard to digital regulation.

MILESTONE 27 SUBJECT TO FINAL AGREEMENT, INRIA WILL BE IN CHARGE OF AN INTERNATIONAL CENTRE OF EXPERTISE ON AI BACKED BY THE GPAI (GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE).

MILESTONE 28 INRIA WILL SET UP AN OPERATIONAL FOLLOW-UP FOR THE *TRANSALGO* PROJECT ON CONTROLLING ALGORITHMS, JOINTLY WITH THE DGE (DIRECTORATE-GENERAL FOR ENTERPRISE).

1.4.3 Boosting dialogue between science and society through scientific outreach

Inria is committed to boosting dialogue between science and society.

The impact of scientific outreach will be enhanced, whether this is through partnerships (with *Univscience*, for example) or through the explicit definition of the scientific outreach role within Inria.

Shared initiatives will also be set up alongside the *Inria Foundation*.

1.4.4 Strengthening ties with France's Ministry for National Education in order to boost impact within schools

The Institute will continue its long-standing efforts in the teaching of digital technology, strengthening its ties with France's Ministry for National Education through projects with proven added value, such as *Class'Code*.

Inria will also support large-scale awareness-raising initiatives on the subject of science and digital technology, whether this is through visits to schools made by researchers and engineers or through the production, alongside *Inria Learning Lab* (in addition to 1.2.3), of reusable content for training providers. In order to achieve this goal, Inria will be the driving force behind a large-scale operation, the aim of which is to raise awareness among a whole age group (the "*Chiche*" project, supported by the *Inria Foundation*).

MILESTONE 29 EACH YEAR FROM 2020 ONWARDS, INRIA WILL PRESENT TO ITS BOARD OF DIRECTORS THE IMPACT METRICS OF ITS SCIENCE COMMUNICATION ACTIVITIES, IN PARTICULAR THROUGH THE JOINT ACTIONS WITH *UNIVERSCIENCE* AND PROJECTS IN SCHOOLS (E.G. *CLASS'CODE* AND *CHICHE*).

1.4.5 Fully participating in the open science scheme

With a proven track record (including its involvement in the development of HAL), all of the work undertaken by Inria in relation to open science will be within the context of France's national plan for open science and the European equivalent (the European Open Science Cloud), with all necessary steps taken to ensure that the Institute reasserts its role as a pioneer, for example in new forms of publications, data from research and software.

In this regard, the *Software Heritage* project will very much be in keeping with this public policy framework at both a French and a European level, the goal being to build the software basis for a policy promoting open science.

MILESTONE 30 DURING THE FIRST HALF OF 2020, INRIA WILL PRESENT TO THE EUROPEAN COMMISSION'S DIRECTORATE-GENERAL FOR RESEARCH A PROJECT ON THE INTEGRATION OF *SOFTWARE HERITAGE* INTO OPEN SCIENCE ACTIONS.

1.4.6 Contributing towards the digital transformation of the state

Inria will contribute towards initiatives for the digital transformation of public activity, including through a partnership with the DINSIC's AI lab, led by the Secretary of State in Charge of Digital Affairs.

1.4.7 Giving a strategic priority to partnerships in the security and defence field

With regard to issues surrounding national sovereignty, closer ties will be developed with ministries in the security and defence field, in which demand for digital technologies is strong, through strategic partnerships with the DGA, the ANSSI and, more generally, the French Agency for Innovation and Defence. Such partnerships will be capable of bringing all of Inria's different tools into play, including the possibility of setting up shared project teams. Where necessary, these will form part of site policies, as in Rennes, for example, with digital security (the creation of a "cyber security institute", working in close collaboration with the DGA) or in Saclay with artificial intelligence (changes being made to the *DATAIA*, with a number of key sectors identified, including defence).

All of these initiatives will be structured in such a way as to ensure they are visible at institute level.

MILESTONE 31 DURING THE SECOND HALF OF 2020, INRIA WILL PRESENT TO ITS BOARD OF DIRECTORS AN ACTION PLAN TO STRENGTHEN ITS PARTNERSHIPS IN THE SECURITY-DEFENCE SPHERE.
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2/ Inria area policy: contribute to the development of major world-level university research sites

This section details Inria's site policy for the period 2019–2023 within the strategic context of contributing to the development of major world-level university research sites:

- The first subsection details the general outline for its site policy, which Inria sees as a significant strategic evolution of its positioning. This outline was drawn up to be coherent with Inria's main academic partners, namely the CNRS, with whom the plan was shared and discussed, as well as research-focused universities.
- The second subsection outlines Inria's strategic aims for each area, which were defined in agreement with the area's leading university partners.

2.1 FULLY INVEST IN INRIA'S PROJECT-TEAM ORGANISATIONAL MODEL TO SERVE THE INTERESTS OF ITS PARTNERS AND THE DEVELOPMENT OF MAJOR UNIVERSITY SITES

Since the initial implementation of French Act 2007-1199 on the freedoms and responsibilities of universities, the State's objective has been to develop research-focused French universities of international standing. This national strategy implies two things: that national research bodies, each with their own make-up, contribute to this initiative; and that these bodies coordinate with each other in their responsibilities to support the area policies.

In this context, Inria must think of itself as an EPST (Public Science and Technology Institute) wholly committed to the development of each of the university sites that it is involved in. Hence integrated research universities must be able to take full ownership of all activity of the local Inria centre as one of its leading lights in the digital world. This profound evolution must be implemented with due regard for Inria's organisational methods and its collaborative relationships with its main partners, the universities, engineering schools and other bodies, the CNRS foremost among them. This will ensure its effectiveness for the areas.

INRIA'S ABILITY TO GENERATE IMPACT CAN BE CHANNELLED INTO THE DEVELOPMENT OF MAJOR UNIVERSITIES THROUGH A NUMBER OF MEASURES, INCLUDING IN TERMS OF LOCAL PRESENCE, GOVERNANCE, ADOPTION OF THE INRIA ORGANISATIONAL MODEL BY ALL STAKEHOLDERS, SMOOTH COORDINATION WITH OTHER ORGANISATIONAL MODELS, HR POLICY, AND AN OPENING UP OF INRIA'S SERVICES TO ITS PARTNERS.

- **Inria is a Public Science and Technology Institute (EPST), a national research body**, which implements its policy in the regions where its research centres are present and fully commits to the development of universities in coherence with its partners.
- **Inria's territorial area** must be concentrated rather than spread out: besides Inria's research centres, its presence in a region could in time take the form of a local research unit with a minimum critical mass and a specific objective. This implies assessing Inria's long-term presence "far from home" and deciding, area by area, on the suitability of setting up a centre (e.g. Lyon), a local research unit (e.g. Strasbourg or Montpellier) or, if necessary, of putting an end to Inria's presence in the area as an Institute in its own right. Sites where Inria's presence is spread out must be the exception and must be handled on a specific, appropriate, case-by-case basis in agreement with its local partners.
- In areas where Inria's territorial presence is concentrated, Inria's role in the dynamics of the area will take the form of **governance**, with a committee developing a joint strategy and joint communication. Therefore:

- The Inria centre located on the campus will become the “Inria Centre of X University”.¹ Consolidating and raising the profile of the Inria brand will reinforce that of the integrated research university.
 - The Inria centre director will be a member of the executive board of the integrated research university and so play an active role in defining the university’s strategy.
 - When abroad, the president of the university will be able to present the “Inria Centre of the Integrated Research University” whether accompanied or not by the centre director.
 - The Inria centre director will receive an annual plan from Inria’s CEO which will have been discussed beforehand with the President of the integrated research university.
- Inria’s business model will be made transparent and available to each area’s partners (universities, engineering schools, CNRS, etc.) to strengthen public stakeholder’s confidence in the policy. In the future, the CEO of Inria and the president of the integrated research university, possibly accompanied by the CEOs of other bodies, will jointly apply to regional authorities for resources for the area’s digital strategy. Inria must thus play an active role in enabling digital investment in an area, whether by Europe, the State, regional authorities or private partners (including through the *Inria Foundation*).
- This evolution must also create the power to consolidate digital investment and digital impact for any given area. If requested by the area’s relevant parties, Inria will undertake to manage this difficult task of consolidation with all public stakeholders (the State and regional authorities).
- The effectiveness of Inria’s organisational model also lies in **simplifying interaction between different organisational models**, reducing transaction and coordination costs between public stakeholders, and moving away from handout culture and funding agencies:
- First of all, the area’s stakeholders will recognise the existence and particularity of Inria’s organisational model. In the digital world, this form of organisation should be considered as complementing the research laboratories and should be consolidated to ensure mutual benefit. since the laboratory model is, of course, a tried and trusted method for supporting research in a structured manner. What’s more, the adoption of the project-team model continues to pose challenges, such as in supporting scientific and entrepreneurial risk-taking in digital technology, solving issues using the interdisciplinarity facilitated by digital technology, and creating new scientific disciplines fuelled by the digital sciences.
 - A notable implication of this is that all relevant parties will encourage researchers from different laboratories (and possibly different disciplines) to become involved in joint project teams between Inria and its partners.
 - Another implication is that Inria’s role is not to supervise the research laboratories. This is regardless of the fact that its activity must contribute to reinforcing that of the laboratories and that it must contribute to their funding through a specific agreement with their supervisory bodies.
 - **The setting up of a project team must be recognised as a key step** in the understanding of the Inria organisational model – and not as a funding agency approach offering additional resources to a research laboratory. The project team must meet a clearly identified objective, such as producing a significant impact on research and

¹ The Inria Paris and Saclay research centres are involved in the dynamic of a number of major universities. They must be treated as specific cases, and the appropriate approaches must be found with partners.

innovation in and through digital technology, or exploring new topics for which a project team may be the most appropriate format.

- As a result, the centre's relevant parties must be able to implement the joint project team model regardless of their organisation into research laboratories, and they must present it as such in their communication (including their activity report).
- **Since it manages the funds of the project teams jointly run with its partners, Inria must of necessity be granted oversight of each project team.**¹ In doing so, it must explicitly fulfil its obligations in terms of information sharing, calculation of performance indicators (which must be fully disclosed between partners), any financial returns and, this being a crucial point, communication: it must be understood that the joint project teams are managed by Inria to benefit all the partners and that Inria cannot claim the fruits of this partnership for itself alone. The granting of this full oversight should first and foremost be understood as the power to work for and invest in the project team.

■ This evolution will have implications with regard to **HR policy** to ensure that the two organisational models (laboratories and project teams) work well together:

- Inria must accept that a researcher it employs may be put at the disposal of a laboratory without being a member of a project team (the researcher's position being defined on a case-by-case basis.)
- Inria's partners must encourage the researchers and teaching researchers they employ to get involved in joint project teams, including teams that straddle several laboratories. This involvement must be significant (e.g., at least 50% of research time) as part of the joint strategy that leads to the creation of a joint project team². The publications of researchers and teaching researchers who are members of a joint project team and who are affiliated with a research laboratory are, of course, included in the list of publications of the latter.

■ Additionally, Inria will clearly demonstrate its commitment to **training** in the areas:

- At a collective level in research centres, Inria must commit to playing its part in any given area's training initiatives. To that end, it must implement appropriate incentive measures among the researchers it employs (with due regard for their position) in collaboration with its partner higher education institutions.
- More broadly, in collaboration with the partners of the area in question, Inria must set up a programme to improve attractiveness by diversifying recruitment pathways based on existing procedures that meet the requirement for scientific excellence, e.g. joint "University-Inria" chairs (recruitment of teaching researchers with partial long-term delegation), associate teaching researchers (researchers with negotiated teaching responsibilities and contribution to teaching departments), Inria Starting Faculty Position (1.1.7, 5-year fixed-term contract with an opportunity during this period for competitive recruitment to Inria director of research, Inria research associate, teaching researcher, permanent contract, etc.) combined with negotiated teaching responsibilities.

¹ It is agreed that if the output of a project team, particularly an interdisciplinary project team, is not digital in nature, then the most appropriate partner will take charge of managing this output.

² A new procedure for setting up joint project teams was implemented on 1 January 2019, in particular following work in collaboration with the CNRS. It will be retained and modified as needed.

- The hallmark of Inria must be as a digital specialist whose investments are likely to benefit all stakeholders. Its effectiveness lies in support functions of a recognised high standard combined with the advantage of being a specialist in digital technology. **It is these support functions that will form the backbone of Inria centres in their provision of specific digital services to all their partners.** These services may include organisational engineering in research (project team lifecycle); software development; set up and maintenance of digital infrastructures; marketing and communication in the higher education, research and innovation ecosystem through digital technology; access to international networks; entry into the European research area (particularly as regards lobbying); strategic industry partnerships in digital technology; and support for Deep Tech digital start-ups (*Inria Startup Studio*, 1.2.1).
- This evolution may also lie in **property**: The Inria centre in an integrated research university could take form as one of the hub buildings of the digital site. It would be open to the digital ecosystem (start-ups, French Tech hub, international companies, and public outreach officers) and be designed for interacting, hosting and leading the way in new approaches to working in research and innovation – a stop-off point in a fast-moving environment. It must be at the heart of a location that possesses attractiveness for companies and a concentration of tech start-ups, thereby driving the campus's digital attractiveness. A significant portion of the project teams will be based in this building, while other joint project teams may be based elsewhere.

TO SUMMARISE, INRIA'S AREA POLICY WILL BE BASED ON AN AMBITIOUS AGREEMENT WITH EACH AREA IN COHERENCE WITH THE CNRS AND OTHER BODIES:

- The Inria centre of an area will become the "Inria Centre of the Integrated Research University" of that area.
- Inria contributes to accelerating the digital dynamic of the area, both in research and innovation.
- Through its centre and its brand, Inria reinforces the international standing of the area's university.
- Inria acts as a full member of the site's governance and a driver of digital technology.
- Inria commits to consolidating the area's digital performance indicators.
- All Inria output (e.g. ERC and start-ups) is output of the university of the area.
- Inria shares its business model.
- Inria increases the area's funding through digital technologies.
- Inria provides a hub of digital experts through its support functions specialised in digital technology.
- Inria can contribute to running one of the hub buildings of the digital area.
- The site's stakeholders explicitly acknowledge the Inria organisational model by delegating the running of joint project teams to it, with the full effectiveness of those teams benefiting the stakeholders.

This site policy forms part of Inria's strategic vision. It reflects the Institute by **requiring a quantifiable impact in research and innovation.**

These objectives will be implemented in a manner appropriate to the dynamic and priorities of each area through an agreement with the area's partners.

2.2 AREA POLICY FOR THE 11 GEOGRAPHICAL LOCATIONS WHERE INRIA WILL IMPLEMENT ITS COP 2019–2023 PLAN

The texts below outline the main objectives of the Inria policy for 11 geographical areas coordinated from the eight Inria research centres. For each area, the objectives in relation to site priorities, scientific goals, economic impact and Inria’s “added value” positioning are described in more detail in the annexes. These objectives have been drawn up in agreement with the leading university partners of these areas.

Notable objectives include a project to set up an Inria centre in Lyon as well as two local research units in Montpellier and Strasbourg. The decisions on setting up these entities will be submitted for approval to Inria’s Board of Directors.

MILESTONE 32 DURING THE SECOND HALF OF 2020, INRIA WILL PRESENT ITS BOARD OF DIRECTORS WITH SCENARIOS FOR THE CREATION OF A NEW RESEARCH CENTRE IN LYON.

MILESTONE 33 DURING THE 2019–2023 PERIOD OF THE *OBJECTIVES AND PERFORMANCE CONTRACT*, INRIA WILL PRESENT ITS BOARD OF DIRECTORS WITH SCENARIOS FOR THE CREATION OF INRIA BRANCHES IN MONTPELLIER AND STRASBOURG, AS A PRIORITY AS PART OF A PARTNERSHIP WITH THE IHU (UNIVERSITY HOSPITAL INSTITUTE).

MILESTONE 34 DURING THE FIRST HALF OF 2020, INRIA WILL SET UP AT EACH OF ITS CENTRES OF A SIGNIFICANT SIZE AND AN APPROPRIATE PROGRAMME OF ACTIVITIES AIMED AT THE ENTREPRENEURIAL ECOSYSTEM, IN LINE WITH ITS SITE POLICY.

➔ **FOR THE PERIOD 2019–2023, INRIA'S STRATEGIC OBJECTIVES FOR THE BORDEAUX AREA WILL BE DRIVEN IN PARTICULAR BY THE INRIA BORDEAUX – SUD-OUEST RESEARCH CENTRE. THEY ARE:**

1. Contribute to the site strategy for digital research, innovation and training centred on a close partnership between Bordeaux University and Inria through a variety of joint initiatives and goals;
2. Clearly position Inria Bordeaux – Sud-Ouest as a major facilitator of digital innovation serving the needs of the region's economic development;
3. Ensure a regional impact throughout Nouvelle Aquitaine developed in accordance with the priorities of local authorities and regional stakeholders in higher education, research and innovation, particularly around the theme of artificial intelligence (AI);
4. Focus on three key scientific areas:
 - a) Convergence of HPC and big data,
 - b) Development of machine learning in relation to the neurosciences and cognitive sciences,
 - c) Digital health, and more specifically the contribution of digital technologies to personalised medicine.

Additionally, Inria will invest in the emergence of new topics on the contribution of digital technology to sustainable development and environmental awareness.

➔ **FOR THE PERIOD 2019–2023, INRIA'S STRATEGIC OBJECTIVES FOR **THE GRENOBLE AREA** WILL BE DRIVEN IN PARTICULAR BY THE INRIA GRENOBLE – RHÔNE-ALPES RESEARCH CENTRE. THEY ARE:**

1. The centre actively participates in the integrated research university project developed by the area's institutions;
2. Move the centre from the Montbonnot site to the Saint Martin d'Hères university campus;
3. Meanwhile, as part of a reworked business model, the Montbonnot site will be used for developing transfer and innovation initiatives with industrial partners;
4. The centre must develop greater scientific focus by reinforcing four scientific themes:
 - a) Data science,
 - b) Environmental modelling,
 - c) Technical, environmental and ethical reliability of software,
 - d) The development of a new activity in quantum computing.

Additionally, this centre will help with the development of the Lyon Inria research centre.

➔ **FOR THE PERIOD 2019–2023, INRIA'S STRATEGIC OBJECTIVES FOR **THE LYON AREA** WILL BE DRIVEN IN PARTICULAR BY THE INRIA GRENOBLE – RHÔNE-ALPES RESEARCH CENTRE. THEY ARE:**

5. Set up an Inria centre in the *Target University* ("Lyon University");
6. Reinforce the interdisciplinary project teams, in particular those resulting from interaction between digital sciences, biology and health, or with all disciplines involved in the development of urban sciences. This reinforcement will be based on two areas:
 - a) Modelling in biology and health,
 - b) Distributed and embedded computer systems.

If the *Target University* is set up in 2020, an initial pre-planning study for an Inria centre in Lyon during the first half of 2020 would make it possible to set up an "Inria Centre of Lyon University" for 1st January 2021.

➔ **FOR THE PERIOD 2019–2023, INRIA'S STRATEGIC OBJECTIVES FOR THE LILLE AREA WILL BE DRIVEN IN PARTICULAR BY THE INRIA LILLE – NORD EUROPE RESEARCH CENTRE. THEY ARE:**

1. Actively contribute to the long-term viability of the University of Lille Nord-Europe I-SITE project as well as to the construction of the project institution, which will amalgamate Lille University, engineering schools, Lille University Hospital and Lille Pasteur Institute;
2. Partnership with *Euratechnologies* to drive the technologies developed by the incubator's start-ups upmarket;
3. Run the regional AI project *humAI'n* in close collaboration with the Hauts-de-France regional authority;
4. Focus on three key scientific areas:
 - a) Data science (in coherence with the CPER *Data project*),
 - b) Software engineering,
 - c) Cyber-physical systems.

Additionally, Inria wishes to invest alongside local stakeholders in reinforcing digital sciences in personalised medicine projects.

➔ **FOR THE PERIOD 2019–2023, INRIA'S STRATEGIC OBJECTIVES FOR THE NANCY AREA WILL BE DRIVEN IN PARTICULAR BY THE INRIA NANCY – GRAND EST RESEARCH CENTRE. THEY ARE:**

1. Actively contribute to the site dynamic fostered by Lorraine University to ensure the long-term viability of the *Lorraine University of Excellence I-SITE*;
2. Develop cross-border cooperation with Germany, particularly around AI and cybersecurity;
3. Establish two scientific priorities:
 - a) Algorithmic intelligence,
 - b) Software-hardware interaction.

Additionally, this centre will help with the development of the local research unit in Strasbourg.

➔ **FOR THE PERIOD 2019–2023, INRIA'S STRATEGIC OBJECTIVES FOR THE STRASBOURG AREA WILL BE DRIVEN IN PARTICULAR BY THE INRIA NANCY – GRAND EST RESEARCH CENTRE. THEY ARE:**

4. Contribute to the site dynamic fostered by Strasbourg University by drawing on the framework agreement signed in 2019 prioritising the contribution of digital technology to personalised medicine;
5. Set up a strategic partnership with IHU Strasbourg to enable the involvement of Inria project teams in the IHU's areas of interest;
6. Set up an Inria local research unit on the Strasbourg area whose primary area of interest will be personalised medicine.

➔ **FOR THE PERIOD 2019–2023, INRIA’S STRATEGIC OBJECTIVES FOR **THE PARIS AREA** WILL BE DRIVEN IN PARTICULAR BY THE INRIA PARIS RESEARCH CENTRE. THEY ARE:**

1. Actively contribute in a balanced fashion to the dynamic of the Université PSL and Sorbonne integrated research universities;
2. Safeguard the long-term viability of the centre building by opening it up to academic partners, industrial partners and the start-up ecosystem;
3. Develop three scientific priorities:
 - a) Become a centre of excellence for national sovereignty in the areas of security and software reliability in partnership with the ANSSI,
 - b) Develop the core of AI to ensure the success of the Paris 3IA PRAIRIE AI institute, which is coordinated by Inria,
 - c) Enhance the interdisciplinary capabilities of the joint project teams, in particular in biology, IT and health, with Assistance Publique-Hôpitaux de Paris, Inserm and the Pasteur Institute.

➔ **FOR THE PERIOD 2019–2023, INRIA’S STRATEGIC OBJECTIVES FOR **THE RENNES AREA** WILL BE DRIVEN IN PARTICULAR BY THE INRIA RENNES – BRETAGNE ATLANTIQUE RESEARCH CENTRE. THEY ARE:**

1. The centre actively participates in the integrated research university project developed by the area’s institutions;
2. Increase activity around digital security in coherence with the Breton ecosystem and the Ministry for the Armed Forces by setting up a multi-partner “cybersecurity centre”;
3. Enhance technological development across the entire area, which will require training and access to tools;
4. Develop four scientific priorities:
 - a) A secure digital society,
 - b) Human–robot–virtual world interaction,
 - c) Digital biology and digital health,
 - d) Computational ecology.

➔ **FOR THE PERIOD 2019–2023, INRIA'S STRATEGIC OBJECTIVES FOR THE SACLAY AREA WILL BE DRIVEN IN PARTICULAR BY THE INRIA SACLAY – ÎLE DE FRANCE RESEARCH CENTRE. THEY ARE:**

1. Support the *DATAIA* Institute to become an international player in data sciences and AI;
2. Support the emergence of Deep Tech start-up projects;
3. Strengthen the sense of affiliation with the Institute, while also consolidating and developing Inria's involvement in Saclay site projects;
4. Reinforce European aspirations, especially the centre's involvement in coordinating European projects;
5. Develop competent, durable, agile support services that contribute to fostering Inria's scientific excellence and innovation dynamic;
6. Prioritise the development of three scientific areas:
 - a) Data sciences and AI,
 - b) Safety, security and reliability of architecture, software and data,
 - c) Modelling, verification and optimisation of complex systems.

Inria's area policy at Saclay will be balanced between the two institutions involved, Institut Polytechnique de Paris and Paris-Saclay University.

➔ **FOR THE PERIOD 2019–2023, INRIA'S STRATEGIC OBJECTIVES FOR THE CÔTE D'AZUR AREA WILL BE DRIVEN IN PARTICULAR BY THE INRIA SOPHIA ANTIPOLIS – MÉDITERRANÉE RESEARCH CENTRE. THEY ARE:**

1. Actively contribute to the achievement and retention of Université Côte d'Azur's *IDEX* certification (*UCA^{JEDI}*);
2. Reinforce partnerships with regional economic stakeholders to match the quality of the ecosystem, be it through the success of the 3IA Côte d'Azur certification process or through management by Inria of the digital aspects of setting up an innovation and partnerships institution within Université Côte d'Azur;
3. Upscale the creation of Deep Tech start-ups;
4. Prioritise the development of two scientific areas;
 - a) The theme of AI in collaboration with the large-scale 3IA Côte d'Azur project: (i) computational medicine, neuroscience and biology; (ii) AI, geometry, heterogeneous data and modelling; and (iii) collaborative robots for open, dynamic environments,
 - b) Research activity in the area of ubiquitous computing (software engineering, security, reliability and certification of software).

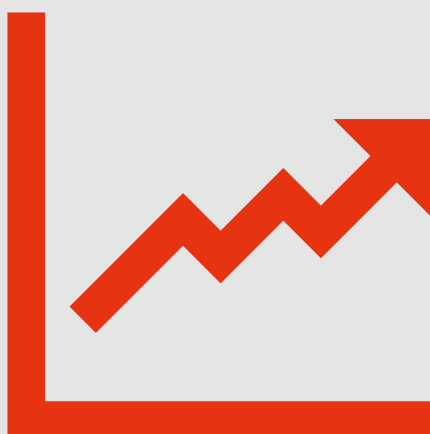
Additionally, this centre will help with the development of the local research unit in Montpellier.

➔ **FOR THE PERIOD 2019–2023, INRIA'S STRATEGIC OBJECTIVES FOR THE MONTPELLIER AREA WILL BE DRIVEN IN PARTICULAR BY THE INRIA SOPHIA ANTIPOLIS – MÉDITERRANÉE RESEARCH CENTRE. THEY ARE:**

5. Develop a fully-fledged local research unit with a dozen or so project teams to ensure the Institute's impact;
6. Develop industrial partnerships and involvement in the start-up ecosystem;
7. Specialise the local research unit in medicine, environment and agronomy;
8. Actively contribute to the Montpellier Data Science Institute.

The development of the Montpellier research unit is a long-standing Inria project which has not been carried through until now due to a lack of funding.

3/ Performance indicators



PRESENTATION OF THE APPROACH

Performance indicators must reflect in the evolution Inria's impact based on an analysis of efficiency (production). This must be consistent with Inria's "added value" positioning.

These indicators relate to Inria's performance in the following six dimensions:

- [A] Scientific impact
- [B] Economic impact
- [C] Inria's collective organisation
- [D] Societal impact
- [E] Area policy
- [F] Ability to establish a financial trajectory

They must measure these dimensions over time and, as often as possible, be benchmarked against a quantity or a flow (for both internal and external comparison).

These indicators must be limited in number. They need to be based on data, and they must be explained in a way that makes it possible to follow changes in a sometimes complex reality may be followed.

Beyond carrying out this process for the Board of Directors and responsible ministerial departments as part of the COP, the implementation of these indicators must also be used to reflect long term on the issue of benchmarking in relation to establishing an international Inria marketing strategy. Inria must therefore set up a fully-fledged "control room" that does more than just monitoring internal activity. This will be done by developing the current Observatoire des activités, Inria's performance analysis team, and it will probably be necessary to seek assistance from external analysts with experience in this area.

With each of these six dimensions, the indicators aim to document (or sometimes illustrate) progress relating to the main objectives set out by Inria in this COP. They must also allow the attainment of these objectives to be verified at the end of the period.

Target values are set for some of the indicators on the date of the signing of the COP since all of the related aspects will only be determined later (calculation method, initial values, etc.).

A document defining the indicators in detail will be drawn up in concertation with the appropriate ministerial departments and communicated to the Board of Directors.

3.1 SCIENTIFIC IMPACT

The six proposed indicators for assessing scientific impact relate to the following objectives:

- The vitality of Inria's organisational model lies in the ability to take risks by rapidly setting up project teams (A1). Inria advocates excellence (A2), prioritising scientific risk-taking (A3) – particularly through interdisciplinarity (A4) – while also promoting the development of software technology (A5). Inria plays an active role in training through, and in, research (A6).

Inria will draw up an annual document presenting a **qualitative analysis of the scientific impact in each field of research**. This will include the number of publications in a selected list of journals and conferences involving project team members, participation in the editorial boards of leading journals, ERC grants, international awards, and, more broadly, anything that can be used to qualitatively assess Inria's scientific impact. **Even if this initiative relating to milestone 1 of the COP is not linked to any indicator in particular, it provides a framework for assessing Inria's scientific impact.**

- **A1: Preparation time for the creation of a new project team** (measured between the date on which approval is sought and that on which the team's creation is signed by the CEO).

Target: 4 months by 2020.

- **A2: Number of ERC grants obtained by Inria project teams.**
- **A3: Ratio of the number of incentive schemes encouraging risk-taking** (exploratory initiatives) and the total number of project teams.

Target: 10% in 2020.

- **A4: Number (or ratio) of project teams active in interdisciplinary projects**, i.e. those who publish in leading journals and conferences in different disciplines, encompassing both digital fields (computer science and mathematics) and other disciplines (biology, health, agronomy, humanities and social sciences, etc.).
- **A5: Number of project teams with a development engineer assigned to it long term, due to the technology-intensive nature of the activity** (e.g. 4 years).
- **A6: Ratio of PhD students to permanent researchers** in the project teams (regardless of funding sources).

3.2 ECONOMIC IMPACT

The five proposed indicators for assessing economic impact relate to the following objectives:

→ Inria supports the heart of French industry (B1) through assistance to Deep Tech start-ups (B2), knowledge sharing (B3), continuing education (B4) and the release of open-source software (B5).

- **B1: Number of medium to long-term strategic partnerships with France-based companies** (a strategic partnership is either an agreement with a large group involving a significant number of project teams and a large number of contracts, or a joint laboratory/Inria Innovation Lab or ANR Labcom with an SME or a large enterprise); or number of large-scale initiatives collaboratively developed with a company and number of joint project teams with a company.

Target: 10% of joint project teams with companies by 2023.

Target: 50% of major Inria actions (25 over the period) co-constructed with one or more companies over the period 2019-2023.

- **B2: Number of projects to create/support technology companies** (through a specific, traceable process called Inria Start-Up Studio implemented as part of the area policy); or number of start-ups actually founded (number of companies registered) and number of jobs created.

Target: 100 projects a year supported by Inria Startup Studio by 2023.

- **B3: Number of staff on fixed-term contracts (PhD students, postdocs, engineers) who join France-based companies** as a *ratio* of the number of fixed-term contract staff leaving Inria.
- **B4: Number of persons who have undertaken an Inria continuing education course** in digital science and technology, in particular in connection with the dissemination of open-source software.
- **B5: Number of items of open-source software disseminated to companies with a proven impact** (existence of a consortium or a significant community of users).

Target: 10 items of open source software with a global impact launched by Inria or a training education subsidiary by 2023.

3.3 INRIA'S COLLECTIVE ORGANISATION

The four proposed indicators for assessing changes in Inria's collective organisation relate to the following objectives:

→ Inria fosters a corporate social policy that advocates more women in science jobs (C1), support for people with disabilities (C2), a sustainable environmental policy (C3) and a good professional quality of life for employees (C4).

- **C1: Percentage of women in project teams** (in particular, proportion of project team leaders who are women and proportion of female PhD students and young researchers recruited as research associates and Starting Research Position (SRP). More broadly, proportion of women in various Inria functions (department heads, executive committee).

Target: 30% female project team leaders by 2023.

- **C2: Percentage of disabled employees at Inria.**

Target: 6% disabled employees at Inria by 2023.

- **C3: The Institute's environmental impact indicators, such as its carbon footprint.**
- **C4: Quality of life at work indicators.**

3.4 SOCIETAL IMPACT

The three proposed indicators for analysing societal impact relate to the following objectives:

→ Inria plays a part in massively disseminating the scientific and technological culture of digital technology in close cooperation with relevant actors, both to the general public (D1) and the school sector (D2). It develops a brand around higher education, research and innovation in digital sciences (D3).

■ **D1:** Number of visitors in joint actions with the CCSTs (scientific and technological culture centres), including *Universcience*.

■ **D2:** Number of school pupils attending a talk by a member of an Inria project team.

■ **Target:** One school year reached by the “*Chiche*” scheme in 2023.

■ **D3:** Public awareness of Inria measured by a survey in France and Europe.

■ **Target:** Aided awareness of the general public over 20% by 2023.

3.5 SITE POLICY

In addition to the previous indicators compiled with the area's academic partners, the four proposed indicators for assessing Inria's area policy relate to the following objectives:

→ Inria is a research and innovation body that operates a project team model to further the development of major research universities of international standing (E1) in digital sciences. This model is implemented by research centres based in the major universities (E2) who also contribute to training (E3). It is a household name in digital research and innovation (E4).

- **E1: Ratio/number of joint project teams with higher education and research institutions** (universities, engineering schools) under Inria management.

Target: 90% or over by the second half of 2020.

- **E2: Number of site agreements setting up an "integrated University Inria centre"** (specifying in particular that the projected indicators in this COP for the site are to be taken as the area's digital indicators).

Target: six by the first half of 2021.

- **E3: Indicators showing Inria's involvement in training.**
- **E4: Number of joint recruitments** by Inria and its partners (Inria Starting Faculty Position).

3.6 ABILITY TO ESTABLISH A FINANCIAL TRAJECTORY

The two proposed indicators for assessing the evolution of Inria's financial trajectory relate to the following objectives:

- Through the strength of its brand and its organisation, Inria is a national institute that leverages funding for research and innovation, either by increasing the amount of European funding secured (F1) or by raising funds from benefactors *via* the Foundation (F2).

- **F1:** Amount of Inria's funding that comes from Europe (including and excluding the amount of ERC funding).

Target amount excluding ERC: €15 million in 2023.

- **F2:** Amount of Inria funding provided by the *Inria Foundation*.

Target: €75 million between 2019 and 2023.

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Annex no. 1 – Objectives for the 11 Inria's areas managed by the 8 centres

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Bordeaux Area / Inria Bordeaux-South-West Research Centre

For the period 2019-2023, Inria's strategic objectives for the Bordeaux area, mainly led by the Inria Bordeaux-South-West research centre, are:

- 1) contribution to the site strategy on research, innovation and training in digital technology based on a strong partnership between the University of Bordeaux and Inria, embodied in a variety of joint undertakings and actions;
- 2) to assert the positioning of the Inria Bordeaux-Sud-Ouest centre as a key player in digital innovation, with the aim of furthering the region's economic development;
- 3) a regional impact across Nouvelle-Aquitaine, planned in connection with the priorities of the regional authorities and actors in higher education, research and innovation, in particular on the theme of artificial intelligence.

→ In 2019, Inria was mainly present in Bordeaux (18 joint project teams), with a targeted presence in Pau (2 joint project teams). Its operations rely on the presence of 332 people, including 195 Inria employees with 50 tenured researchers and 42 permanent staff in support functions.

The area's challenges and Inria's positioning in adding value

The main challenge identified is the reinforcement of Inria's participation in the dynamics of the area's development led by the University of Bordeaux, a university with intense research activities and permanently granted the *Initiative d'excellence (Idex)* label in 2016. On the basis of what already exists (17 joint project teams working in laboratories under University of Bordeaux control), Inria will be actively involved in governance and in defining the strategy through the Engineering and Digital Sciences department and the major research programmes that will be attached to it in 2019/2020. One of the expected benefits is greater involvement in interdisciplinary dynamics. Co-founder of the Liryc university hospital institute, Inria will, for example, be doubling its involvement in this institute over the period 2019-2026, as described in the letter of commitment sent to the ANR (French National Research Agency) in May 2019. At the same time, the centre will actively and significantly contribute to the dynamics of the Pau site led by the University of Pau and Pays de l'Adour, with the aim of guaranteeing the future of the Isite E2S co-founded by Inria and the development of the related industrial collaborations.

Scientific objectives

Inria will reinforce three priority areas of scientific development:

1. convergence between HPC and Big Data;
2. machine learning, developed in conjunction with neuroscience and cognitive science;
3. digital health, and more specifically the contribution of digital technology to personalised medicine.

In addition, Inria will invest in the emergence of new themes connected to the contribution of digital technology to sustainable development and eco-responsibility.

Objectives related to economic impact

Inria's objective is to develop its economic impact through several actions to the benefit of all the actors in the area, as part of its strategic partnership with the University of Bordeaux:

- building synergies with University of Bordeaux student entrepreneurship policies and reinforcing the links with regional actors in innovation and entrepreneurship (business incubators and accelerators, technology parks and clusters, FrenchTech Bordeaux, the Nouvelle-Aquitaine development and innovation agency, BPI France, etc.) through regular joint actions;
- implementing and opening to the area's partners of the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with a target of 10 startup projects a year by the end of the *Objectives and Performance Contract* (COP);
- drawing up and implementing a regional plan dedicated to artificial intelligence, as part of a project entrusted to Inria by the Nouvelle-Aquitaine regional authority.

Grenoble Area / Inria Grenoble-Rhône-Alpes Research Centre

For the period 2019-2023, Inria's strategic objectives for the Grenoble area, mainly led by the Inria Grenoble-Rhône-Alpes research centre, are:

- 1) active participation by the centre in the Integrated University project conducted by the establishments in the area;
- 2) the centre's move from the Montbonnot site to the Saint Martin d'Hères university campus;
- 3) at the same time, the Montbonnot site will be in charge of transfer and innovation actions with industrial partners, as part of a new economic model;
- 4) a greater scientific focus by the centre on reinforcing four scientific areas.

- In addition, the Centre will be supporting the development of the plans for an Inria centre in the Lyon area.
- In 2019, Inria's presence in the Grenoble area consists of 24 project teams, all of them run jointly with the partners of the Université Grenoble-Alpes ComUE (community of universities and institutions), with 60 tenured researchers and 52 support staff out of a total of 221 Inria employees.

The area's challenges and Inria's positioning in adding value

The Grenoble area is involved in a project to create an integrated university and it has been proposed to the CEA, the CNRS, Inserm and Inria, the research bodies most involved, that they contribute to the development and international reach of this new university, in particular by participating in its governance, on both the management council and the board. This active participation is a logical continuation of the centre's presence on the governing bodies of the *Idex* and the ComUE. The aim for Inria is to position itself in this new institution in line with its overall site policy, founded on Inria's operation of the project team model. In this context, Inria will also support three structural components:

1. the centre's strong presence in the MIAI (Multidisciplinary Institute in Artificial Intelligence) project, which will provide the means to accelerate the development of multidisciplinary research, which is already very present with the University of Grenoble-Alpes *IDEX* project;
2. the Equipexes (excellence infrastructures) operated by the centre (Kinovis and Amiq4home), which serve to reinforce multidisciplinary and experimental research with a view to technology transfer;
3. the centre's move from the Montbonnot site to the Saint Martin d'Hères university campus, which will allow for greater interaction with the LIG, LJK and VERIMAG digital laboratories, a project that could be funded under the next CPER (State-region plan). At the same time, the Montbonnot site will be devoted transfer and innovation actions with industrial partners, as part of a new economic model;

Scientific objectives

Inria will reinforce four priority areas of scientific development:

1. data science and artificial intelligence, as part of the MIAI 3IA (interdisciplinary AI institute) project: the aim is to study and develop a complete stack of techniques ranging from effective access techniques to large volumes of data to HPC, compilation and runtime techniques that can use these data, to new AI algorithms, and their use in applications such as robotics;
2. environment modelling, for example in oceanography, meteorology or territorial development, or the modelling of rare or extreme events;
3. the technical, environmental and ethical reliability of software;
4. arts and digital technology: the aim is to study and develop tools to assist the creative process or enrich practices in the visual, cinematographic or performing arts.

In addition, Inria wishes to invest in the emergence of a new activity in quantum computing.

Objectives related to economic impact

Inria will develop its economic impact through several actions to the benefit of all the actors in the area involved in digital technology, as part of its strategic partnership with the Integrated University:

- reinforcing transfer activities linked to the Amiqua4home, Kinovis and “Véhicule autonome” platforms, in particular by using the EasyTech scheme operated by the Minalogic cluster;
- continued involvement in the innovation ecosystem in Grenoble (competitiveness clusters, IRT, SATT Linksium, Tarmac incubator, etc.);
- implementing and opening to the site's partners the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with a target of 12 startup projects a year by the end of the *Objectives and Performance Contract (COP)*.

Lyon Area / Inria Grenoble-Rhône-Alpes Research Centre

For the period 2019-2023, Inria's strategic objectives for the Lyon area, mainly led by the Inria Grenoble-Rhône-Alpes research centre, are:

- 5) creating the Inria centre of the *Target University* ("Université de Lyon");
- 6) reinforcing the interdisciplinary project teams, in particular those based on interactions between digital sciences, biology and health, or with all the disciplines involved in the development of urban intelligence, through two areas: modelling in biology and health, and distributed and embedded computing.

- Supposing that the *Target University* is created in 2020, working on a pre-planning study for an Inria centre in Lyon during 2020 should enable a "University of Lyon Inria Centre" to be created on 1 January 2021.
- With a presence in Lyon since 1992, in 2019 Inria represented 16 project teams, all of them joint projects divided equally between the La Doua site and the Gerland area, and a force of 29 permanent researchers and 8 civil servant support staff out of a total of 112 Inria employees. The creation of a fully functioning Inria centre would require a substantial increase in the number of support staff to reach a sufficient critical mass, with a target of at least 25 extra people and more sustained recruitment of young researchers.

The area's challenges and Inria's positioning in adding value

The success of the *Idex* project, the effective setting up of the *Target University* and the decision to choose digital technology as a strategic research axis for the future establishment are of course the prerequisites for the creation of an Inria centre in Lyon. The creation of this centre would be the embodiment of Inria's site policy on the Lyon site, placing its organisational model (based on project teams) and the related services at the service of its partner institutions, as part of their *Target University* project.

Inria's place could be, first of all, as a member of the strategic orientation committee, where it could participate in the definition of the research and technology transfer strategy in the digital field, which goes far beyond mere computing, and on the research committees of the "Science and Humanities" and "Engineering" departments. Membership of the same committee in the "Biology and Pharmaceutical Sciences" department would also be desirable, given Inria's scientific positioning in Lyon.

In addition, as digital technology impacts every field, it would be interesting to set up a cross-functional working group (and not a structure) to build bridges between the different fields concerned and implement the strategy decided in this area by the strategic orientation committee. Inria would naturally have its place in any such group.

Scientific objectives

Inria will reinforce two priority axes of scientific development:

1. distributed and embedded computing in its broadest sense, from high performance computing to robot communication to telecommunications, in particular in the context of the development of urban intelligence;
2. modelling in biology and health, AI being a point where this axis and the previous one overlap.

In addition, Inria wishes to develop its links with research in engineering, which is very strong in the Lyon area.

Objectives related to economic impact

Inria will develop its economic impact through several actions to the benefit of all the actors in the area involved in digital technology, as part of its strategic partnership with the Integrated University:

- implementing and opening to the area's partners the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with a target of 5 startup projects a year by the end of the *Objectives and Performance Contract (COP)*;
- reinforcing Inria's involvement in the innovation ecosystem specific to the Lyon area (competitiveness clusters, FrenchTech, SATT, etc.).

Lille Site / Inria Lille-Nord Europe Research Centre

For the period 2019-2023, Inria's strategic objectives for the Lille area, mainly led by the Inria Lille-Nord Europe research centre, are:

- 1) active participation in the long-term securing of the University of Lille-Nord Europe (ULNE) I-Site and active participation in the construction of the target institution, which will integrate the University of Lille and the engineering schools and associate with them Lille university hospital, the Institut Pasteur in Lille, the CNRS, INSERM and Inria;
- 2) the partnership with *Euratechnologies* focused on upgrading the technologies promoted by the region's startups;
- 3) operation of the regional *humAIn* project on artificial intelligence, in close cooperation with regional actors in Hauts-de-France.

→ In 2019, Inria is present in the Region with 14 joint project teams based on the Lille area. Its operations involve 302 people including 176 Inria employees with 35 permanent researchers and 35 permanent staff in support functions.

The area's challenges and Inria's positioning in adding value

Higher education and research in the Hauts-de-France region is being reconfigured into three areas, and Inria should contribute added value in two areas: (i) at regional level, by leading or coordinating global projects such as *humAIn*, in favour of artificial intelligence, (ii) in the Lille area, by defining joint strategies with the University of Lille, in the context of constructing the new target institution and the securing of the future of the ULNE I-Site. As a result, Inria's priorities for the area are:

- active participation in the long-term securing of the ULNE I-Site and active participation in the construction of the target institution, which will integrate the University of Lille and the engineering schools and associate with them Lille university hospital, the Institut Pasteur in Lille, the CNRS, INSERM and Inria;
- the ramping up of the *humAIn* project, co-led by Inria at the site, with a flexible form of governance, so as to make it a tool that can serve regional policy in favour of artificial intelligence.

Scientific objectives

Inria will reinforce three priority areas of scientific development:

1. data science (in line with the *DATA* project in the CPER (Stare-region plan) 2015-2020);
2. software engineering;
3. cyber-physical systems.

In addition, Inria wishes to invest with local actors in reinforcing digital sciences in personalised medicine projects.

Objectives related to economic impact

Inria will develop its economic impact through several actions to the benefit of all the actors in the area involved in digital technology, as part of its strategic partnership with the Integrated University:

- recognizing the Inria Interface building in the heart of *Euratechnologies* as a regional showcase for in digital technology which is emblematic of the transfer of research to companies; this objective is part of the preparation of the *Lille World Design Capital* initiative in 2020;
- implementing and opening to the site's partners of the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with a target of 7 startup projects a year by the end of the *Objectives and Performance Contract* (COP); this scheme should be seen in particular as part of a structured relationship with *Euratechnologies* aimed at encouraging *Euratechnologies* startups to take on Inria technologies.
- developing *InriaTech* to turn it into a technology transfer tool serving the Hauts-de-France region and encompassing all of Inria's transfer schemes;
- mobilizing Inria's transfer schemes in favour of actions conducted as part of the *HumAIn* project for companies that are part of the industrial fabric of Hauts-de-France, in particular in the trade, energy and transport sectors.

Nancy Site / Inria Nancy-Grand Est Research Centre

For the period 2019-2023, Inria's strategic objectives for the Nancy area, mainly led by the Inria Nancy-Grand Est research centre, are:

- 1) active participation in the dynamics of the area led by the University of Lorraine, with the aim of securing the long-term future of the LUE I-Site;
- 2) development of cross-border cooperation with Germany, in particular on AI and cybersecurity;
- 3) assertion of scientific priorities on "Algorithmic Intelligence" and "Software-Hardware Interaction".

- In addition, the Centre will be supporting the development of the Inria branch in the Strasbourg area.
- In 2019, Inria's presence in the Nancy area consists of 19 project teams (including 16 with the LORIA), with 56 tenured researchers and 42 support staff out of a total of 174 employees.

The area's challenges and Inria's positioning in adding value

The Lorraine area has only one university, which is in charge of the *Lorraine University of Excellence* (LUE) I-Site. It has a longstanding culture of dialogue thanks to the setting up of a local coordination structure, the CCOSL, involving the University of Lorraine, the Public Science and Technology Institutes (EPSTs, including Inria) and the university hospital. The site also has the particularity of having 11 engineering schools, including *Télécom Nancy* and *Mines de Nancy*, with which the Inria centre has many interactions. Finally, the Grand Est Region, with its geographical location at the heart of Europe, has a strong commitment to structuring and supporting the dynamics of research and innovation around digital technologies and AI. As a result, Inria's priorities will be:

- active participation in the securing of the long-term future of the LUE I-Site, in the LUE's dynamics and focus on PhDs, its appeal, mobility and international relations and, generally, the dynamics of the University of Lorraine overall; the involvement of researchers in teaching;
- design and running of a structural project in the digital field (on AI in particular), in conjunction with the Grand Est regional authority;
- contribution to the site's international reach, in particular with the construction of a strong cross-border partnership, especially the DFKI on AI and the CISPA on cybersecurity.

Scientific objectives

Inria will reinforce two priority axes of scientific development:

- “Algorithmic Intelligence”: to give computer software the same “solidity” as mathematics by applying its skills in formal methods, symbolic approaches/symbolic AI, hybrid symbolic/digital approaches and mathematics to develop new methods, verification tools and computer languages, in particular for computer security;
- “Software-Hardware Interaction” (through robotics, 3D printing, sensors & hardware) by developing interdisciplinary research between computing, mathematics and other sciences (e.g. materials and health). In addition, Inria wishes to invest in the emergence of new themes (GPUs, FPGAs, etc.), new specialised hardware architectures for certain types of calculation (cryptography, geometry, digital simulation) and quantum computing.

Based on these two themes, Inria’s ambition is to become a reference for training in the new “cutting edge” technologies for students (masters, theses, engineering schools).

Objectives related to economic impact

Inria will develop its economic impact through several actions to the benefit of all the actors in the area involved in digital technology, as part of its strategic partnership with the University of Lorraine:

- participating in structuring the area’s development in digital-centred research-transfer-innovation (and AI in particular), in conjunction with the Grand Est regional authority;
- implementing and opening to the site’s partners of the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with a target of 6 startup projects a year by the end of the *Objectives and Performance Contract* (COP);
- participating in developing continuing education in cutting edge digital technologies for industry in Lorraine.

Strasbourg Area / Inria Nancy-Grand Est Research Centre

For the period 2019-2023, Inria's strategic objectives for the Strasbourg area, mainly led by the Inria Nancy-Grand Est research centre, are:

- 4) participating in the dynamics of the site run by the University of Strasbourg, on the basis of the framework agreement signed in 2019, with priority going to the contribution of digital technology to personalised medicine;
- 5) setting up a strategic partnership with the Strasbourg IHU (university hospital institute) which will enable any Inria project team to become involved in areas of interest to the IHU;
- 6) setting up an Inria branch on the Strasbourg site.

→ In 2019, Inria is present in Strasbourg with 3 joint project teams, with 6 permanent researchers out of a total of 18 employees.

The area's challenges and Inria's positioning in adding value

In the digital field, the Strasbourg site is characterised by a strong dynamic on subjects linked to digital technologies and health, led by an IHU with global visibility and the *Icube* laboratory. The site also hosts the *IRMA mathematics laboratory*. As a result, Inria's priorities will be:

- contributing to the site's dynamics on certain target subjects, either by opening up Inria schemes, in particular to support the creation of DeepTech digital startups (*Inria Startup Studio*), in close relations with the *Conectus SATT* (technology transfer accelerator company) or by reinforcing collaboration with *ICube* and *IRMA* on digital simulation, high performance computing and their applications in personalised medicine;
- reinforcing the dynamic of the IHU by setting up a real national partnership between Inria and the IHU, which will enable any Inria project team (including those in all the other areas) to get involved in subjects of interest to the IHU, Inria incentive schemes (e.g. *Inria Project Labs* or assistance with software development) and the *Inria Startup Studio* scheme;
- coherent involvement in the Nancy and Strasbourg area in regional projects on digital technologies and artificial intelligence in particular.

Inria's aim is to create, by the end of the *Objectives and Performance Contract* (COP), an Inria branch in the Strasbourg area, which is clearly identified by partners.

Scientific objective

Inria will reinforce the priority focus on personalised medicine, in line with the dynamics of the *ICube* laboratory and the Strasbourg IHU.

Objectives related to economic impact

Inria will develop its economic impact through several actions to the benefit of all the actors in the area involved in digital technology, as part of its strategic partnership with the University of Strasbourg:

- participating in structuring the site's development in digital-centred research-transfer-innovation (and AI in particular), in conjunction with the Grand Est regional authority;
- implementing and opening to the site's partners of the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with a target of 4 startup projects a year by the end of the *Objectives and Performance Contract* (COP), in line with the actions of the IHU and the *Conectus SATT*.

Paris Area (as priorities PSL and SU) / Inria Paris Research Centre

Over the period 2019-2023, Inria's area policy for Paris will be balanced between two stakeholders, Paris Sciences Lettres (PSL) and Sorbonne University (SU). The objectives for the area, under the responsibility of Inria's Paris research centre will be adapted with each of these two major partners and built on a common base.

Inria's common strategic objectives for the Paris area are:

- 1) active and balanced participation in the dynamics of the integrated universities, Paris Sciences et Lettres (PSL) and Sorbonne University (SU);
- 2) the ambition to become a guarantor and key resource for national sovereignty on software and data security, in a partnership with the ANSSI;
- 3) the success of the *Prairie 3IA* (interdisciplinary AI institute), which is coordinated by Inria;
- 4) guaranteeing the long-term sustainability of the centre's real estate by opening it up not only to its academic partners, but also to industrial partners and the startup ecosystem.

These objectives are completed by specific strategic objectives with each of the site's two major partners;

→ with Paris Sciences Lettres (PSL):

- development of joint project teams with PSL on software and data security;
- working with PSL, which is a founder member, to build *Prairie's* success;
- opening of the specific programme on raising awareness of digital entrepreneurship and tying the programme in with the support for DeepTech digital startups, *Inria Startup Studio*;

→ with Sorbonne University (SU):

- reinforcing top level training in partnership with SU on software and data security;
- core AI development, and its applications, which should lead, with SU, to a collaboration with the *SCAI project* (Sorbonne Center for AI), to explore and exploit the interaction between statistical learning and mathematical models of physical or biological phenomena;
- sharing of Inria expertise in software transfer beyond the joint project teams and participating, in the digital field, in SU's stated strategic orientation consisting of "Developing entrepreneurship, innovation and knowledge transfer".

→ In 2019, the Inria centre has 33 joint project teams. Its operations involve 582 people including 324 Inria employees with 102 tenured researchers and 62 permanent staff in support functions. As well as the centre's own buildings, Inria has a presence on two main areas: firstly, the PSL site, mainly with PSL/DIENS (60% of the researchers at the DIENS), and secondly the SU site, mainly with SU/LJLL (53% of the researchers at the LJLL). Finally, due to the specific situation in the Paris region, the centre will develop programmes to take on young researchers, working for example with the CROUS student services organisation.

The area's challenges and Inria's positioning in adding value

Inria is a partner of the *PSL*, *SU* and *UP Idex* schemes and a member of their governance bodies. All the schemes set up are intended to be tied in and shared with the academic partners:

- with *SU*, sharing of expertise on software transfer beyond the joint project teams;
- with *PSL*, opening of the specific programme on raising awareness of digital entrepreneurship and tying the programme in with the support for DeepTech digital startups, *Inria Startup Studio*;

Scientific objectives

Inria wishes to reinforce three priority axes of scientific development:

1. become a benchmark centre on data security thanks to skills that are probably unique in France and even in the world, through a partnership with the ANSSI, and reinforce top-level training in partnership with *SU*;
2. develop the AI core to make the *Prairie 3IA* a success:
 - a. in strong collaboration with *PSL*, develop and reinforce the AI core;
 - b. in collaboration with the *SCAI project* (Sorbonne Center for AI), exploring and exploiting the interaction between statistical learning and mathematical models of physical or biological phenomena;
3. reinforce the interdisciplinary capacity of the joint project teams, in particular in biology/computing/health *via* links with AP-HP (Paris hospitals authority), the Inserm or the Institut Pasteur.

In addition, Inria will strengthen its close links with the *Palais de la Découverte* on the dissemination of scientific and technical culture (focused on a permanent exhibition on computing and the digital sciences) and will develop its ties with *Universcience* on a more general level, including with the *Cité des Sciences et de l'Industrie*.

Objectives related to economic impact

Inria's objective is to develop its economic impact through several actions to the benefit of all the actors in the area involved in digital technology, as part of its strategic partnerships with *PSL* and *SU*:

- implementing and opening to the site's partners of the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with a target of 25 startup projects a year by the end of the *Objectives and Performance Contract* (COP); by mobilising the entire Parisian ecosystem (*Agoranov*, *Station F*, *SATT*, etc.) and exploring tie-ins with *SU*'s target masters courses, *PSL*'s *PSL-Pépité* scheme and training at Dauphine
- constructing and implementing partnerships in the Security and Defence fields with partners like the ANSSI or *Thales*, or reinforcing partnerships with industrial players like *EDF*, *Safran*, *Airbus*, *Michelin*, *Orange* and *Nokia*.

Rennes Area / Inria Rennes-Bretagne Atlantique Research Centre

For the period 2019-2023, Inria's strategic objectives for the Rennes site, mainly led by the Inria Rennes-Bretagne Atlantique research centre, are:

- 1) active participation by the Centre in the Integrated University project conducted by establishments in the area;
- 2) reinforcement of the digital security activity in line with the breton ecosystem and the Ministry of the Armed Forces, by setting up a multi-partner "Cybersecurity Centre";
- 3) reinforced technological development of the entire site, which will imply training and access to tools.

→ In 2019, Inria's presence consists of 28 joint project teams in Rennes, 1 in Lannion (including 24 with the Irisa) and it involves 648 people including 316 Inria employees with 74 tenured researchers and 62 permanent staff in support functions. The centre also has 2 joint project teams in Nantes with the LS2N.

The area's challenges and Inria's positioning in adding value

Inria's priority is to focus on the dynamics of the Rennes sites, with the following major actions:

- active participation in the construction and implementation of an integrated university project in the Rennes area, enabling the integration of the Inria centre within it and the latter's full participation in the governance, in order to develop synergies and increase the site's visibility and agility in the field of digital technology and mathematics;
- involvement in the two digital Labexes (excellence laboratories) - *CominLab* and - recently renewed and led by the University, with a view to securing their continuation beyond the PIA (Future Investment Programme);
- reinforcement and structuring of the research, teaching and innovation in digital security components, centred on the civilian/military duality, with links to the massive presence of the DGA (armed forces directorate), creation of a multi-laboratory, multi-partner "Cybersecurity Centre", entirely consistent and in synergy with the *Cyberschool university research school* (EUR) and in conjunction with other actors in the field such as the *Pole Excellence Cyber* and the *b<>com technological research institute* (IRT);
- reinforcement of activities in the environment, agriculture and agrifood fields, in partnership with INRA and *Agrocampus*, in connection with the site project centred on Environmental Intelligence (genomics, data processing, monitoring systems and robotics applied to precision agriculture);
- inclusion of the site in the European higher education and research area on the digital component, in particular *via* enhanced participation in the KIC Digital and the European Digital UniverCity (EDUC) recently officialised and *via* its inclusion in the *Horizon Europe* programme.

Scientific objectives

Inria wishes to reinforce four priority axes of scientific development:

1. secure digital society;
2. human-robot-virtual world interaction;
3. biology and digital health;
4. digital ecology.

Inria will reinforce the structuring of the research platforms and software that come out of the research, and will develop new technological activities, in particular in conjunction with the *Eskmemmdata* (Datacenter) project, the *Digisport university research school* (EUR) and the *SILECS TGIR* (very large research infrastructure) and *Progedo* (management of human and social science data).

Objectives related to economic impact

Inria's objective is to develop its economic impact through several actions to the benefit of all the actors in the Rennes area, as part of the strategic framework of the Rennes integrated university project:

- implementation and opening to the site's partners, including Pool and Emergys, of the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with a target of 15 startup projects a year by the end of the *Objectives and Performance Contract* (COP);
- significant reinforcement of links with the Ministry of the Armed Forces actors on the site;
- creation of a programme to assist software development open to all our partners (both academic and even industrial), in consultation with our partners who have embarked on a DeepTech strategy.

Saclay Area / Inria Saclay-Île-de-France Research Centre

Over the period 2019-2023, Inria's site policy for Saclay will be balanced between two stakeholders, Institut Polytechnique de Paris (IPP) and Université de Paris Saclay. The objectives for the area, under the responsibility of Inria's Saclay-Île de France research centre will be defined with each of these two major partners and built on a common base.

Inria's common strategic objectives for the Saclay area are:

- 1) support for *DATAIA* to make it a global player in the data science and AI world;
- 2) support for the emergence of DeepTech startup projects;
- 3) strengthening the feeling of belonging to the Institute, whilst consolidating and developing its involvement in the Saclay area's projects;
- 4) reinforcement of the European ambition and in particular the centre's involvement in the coordination of European projects;
- 5) the development of agile, sustainable, competent support services that are capable of making a strong contribution to Inria's scientific excellence and innovation dynamic.

These objectives are completed by specific strategic objectives with each of the area's two major partners;

→ with the Institut Polytechnique de Paris:

- strong interaction with IPP's *AIDA* centre dedicated to Artificial Intelligence;
- collaboration with IPP's *DRAHI-X* incubator;
- as a priority, investment in 3 of Institut Polytechnique de Paris's 5 future centres dedicated to (1) Cybersecurity, (2) Artificial Intelligence, (3) Biology-Health. Inria will also invest, although to a lesser extent, in the Climate-Energy centre;

→ with Université de Paris Saclay:

- reinforcement of the European ambition and in particular the centre's involvement in the coordination of European projects, including *EUGLOH* (European University Alliance for Global Health);
- collaboration with the incubators of the founder members of Université de Paris Saclay, including the IPHE;
- as a priority, investment in the *Graduate School of Computer Science* and the *Graduate School of Mathematics*, for which it will operate. The Inria Saclay site will also be an associate operator for three other Graduate Schools at UPSaclay, (1) Life Science and Health, (2) Engineering and Systems Sciences, and (3) Higher Education and Research Professions.

→ In 2019, Inria is present at Saclay with 28 project teams (including 11 joint teams with UPSaclay and 11 with IPP, plus 6 Inria-only project teams), in collaboration with main academic organisations in the Saclay area. Its operations rely on the presence of 483 people including 272 Inria employees with 81 permanent researchers and 59 tenured staff in support functions.

The area's challenges and Inria's positioning in adding value

The Saclay area is characterised by two academic grouping projects, Institut Polytechnique de Paris and Université Paris Saclay. As far as digital science is concerned, the Saclay site enjoys world ranking, in particular in the artificial intelligence field. In this context, the Inria centre suffers from a certain fragmentation due to its multiple locations, which is not favourable to the construction of an Inria collective. For the period concerned by the COP, Inria's priorities are:

- active participation in the construction of the two academic groupings, Institut Polytechnique de Paris and Université Paris Saclay;
- concentration of the centre geographically into two main locations, the Inria IPP pole situated on the Ecole Polytechnique site and the Inria UPSaclay pole on the Moulon site, in order to build a thriving Inria collective that feels as if it belongs to the Institute whilst consolidating and developing its pivotal role within the dynamics of the sites;
- Support for *DATAIA*, for which Inria provides the scientific coordination. The ambition of *DATAIA* is to become a data science and AI player recognised at world level. To do so, *DATAIA* must have a common vision and ambition for the Saclay campus, covering research, innovation, academic and industrial partnerships and teaching. In addition, *DATAIA* will reinforce the interdisciplinary nature of the research work, in particular with the health field and social and human sciences.

Scientific objectives

Inria wishes to reinforce three priority axes of scientific development:

1. data science and AI;
2. safety, security and reliability for architectures, software and data;
3. modelling, control and optimisation of complex systems.

In line with the establishment policy, Inria will give priority to the emergence of breakthrough and risky scientific projects.

Objectives related to economic impact

Inria's objective is to develop its economic impact through several actions to the benefit of all the actors in the area involved in digital technology, as part of the strategic partnership with the two academic groupings. Among these actions, the major objective will be the implementation and opening to the area's partners of the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with a target of 20 startup projects a year by the end of the *Objectives and Performance Contract* (COP), involving local actors in innovation (*IncubAlliance*, IPP's *DRAHI-X*, the *AgroParisTech* incubator, *Design Spot* and UPSaclay's *IPHE*, *HEC*, *SATT*, etc.) and the main graduate schools on the site.

"Côte d'Azur" Site / Inria Sophia Antipolis-Méditerranée Research Centre

For the period 2019-2023, Inria's strategic objectives for the Côte d'Azur area, mainly led by the Inria Sophia Antipolis-Méditerranée research centre, are:

- 1) active participation in the success of the University of Côte d'Azur *IDEX (UCA^{JEDI})* and the securing of its future;
- 2) reinforcement of partnerships with the economic actors in the region at an appropriate level of quality for the ecosystem, whether through the success of the *Côte d'Azur 3IA* (interdisciplinary AI institute) or Inria's responsibility for the digital dimension in the setting up of the Innovation and Partnerships Institute of the University of Côte d'Azur;
- 3) scaling up to enable the creation of DeepTech startups.

- In addition, the centre will be supporting the development of the Inria branch in the Montpellier area.
- In 2019, Inria is present at Sophia Antipolis and in Nice with 30 project teams, half of which are joint teams. Its operations rely on the presence of 472 people including 313 Inria employees with 103 tenured researchers and 61 permanent staff in support functions.

The area's challenges and Inria's positioning in adding value

As part of the area's dynamics centred on the new experimental university, the University of Côte d'Azur (UCA), Inria will continue to actively contribute to the transformation of the Côte d'Azur area into an important centre with high visibility at an international level thanks to the excellence of its research. From 2020 onwards, Inria will be represented on the Bureau of the future experimental university (as well as the Board), not to mention the high level of involvement of Inria researchers in the different bodies of University of Côte d'Azur. In particular, Inria and University of Côte d'Azur will be encouraging the development of interdisciplinarity through the setting up of joint project teams involving several laboratories.

To achieve this, Inria will be able to rely, first of all, on its historic partnership within the University of Côte d'Azur ComUE (community of universities and institutions), for which the research centre director runs the Innovation programme and serves as vice-president in charge of Innovation for UCA, and secondly on recent successes such as the *UCA^{JEDI} IDEX*, the *Côte d'Azur 3IA*, the *UCN@Sophia* and *Signalife* Labexes and the *Digital Systems for Human (DS4H)* university research school (EUR), the only French EUR in the digital field – successes in which Inria has invested a great deal. Finally, the Sophia Antipolis ecosystem is particularly favourable to the digital technology and software field and the conditions are extremely favourable to the development of collaborations between academic organisations and companies, as was illustrated by the mobilisation of companies for the *Côte d'Azur 3IA* (interdisciplinary AI institute).

Scientific objectives

Inria wishes to reinforce two priority axes of scientific development:

1. develop the artificial intelligence theme in conjunction with the structural *Côte d'Azur 3IA* project, in particular on: (i) biology-health including medicine, computational neuroscience and biology, (ii) the links between AI, geometry, heterogeneous data and modelling, and (iii) collaborative robotics for open and dynamic environments;
2. develop research activities in the ubiquitous computing field, in particular on the themes of software engineering, software security, reliability and certification.

To meet the second strategic objective, it will be important to have an offer more in tune with companies' needs and to reinforce the centre's computing side, in particular in software engineering.

Objectives related to economic impact

Inria's objective is to develop its economic impact through several actions to the benefit of all the actors in the area involved in digital technology, as part of its strategic partnership with University of Côte d'Azur:

- development of a real estate project to turn the Sophia Antipolis Inria site into a Digital Science and Innovation Centre open to companies and fostering the creation of startups;
- implementation and opening to the site's partners of the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with the aim of multiplying the number of startup projects per year by ten by the end of the *Objectives and Performance Contract* (COP); (once the *InriaTech* scheme is made available to the *UCA^{JEDI}* digital challenge reference centre), i.e. 25 startup projects per year;
- reinforcement of an industrial partnership strategy, closely tied in with the national policy (first approaches to *Amadeus*, *Renault*, *SAP*, *Thales DMS*, *Thales Alenia Space*, *Docaposte* and others);
- Inria's responsibility for the digital dimension in the setting up of the Innovation and Partnerships Institute of the University of Côte d'Azur, in particular through the opening up of its support services on industrial partnerships, transfer and innovation.

Montpellier Area / Inria Sophia Antipolis-Méditerranée Research Centre

For the period 2019-2023, Inria's strategic objectives for the Montpellier site, mainly led by the Inria Sophia Antipolis-Méditerranée research centre, are:

- 4) development of a "real" branch with about ten project teams to ensure the Institute's impact;
- 5) specialisation by the branch in medicine, the environment and agronomy;
- 6) development of relations with industry and involvement in the startup ecosystem;
- 7) active involvement in the Institut de Science des Données de Montpellier (ISDM).

→ The development of a branch in Montpellier is a historic project of Inria's, which it has never been able to bring to fruition, due to a lack of resources. Inria has been present on the Montpellier site since 2014 and in 2019 has 4 joint project teams. Its operations involve 51 people, including 22 Inria employees with 12 tenured researchers and 3 permanent staff in support functions.

The area's challenges and Inria's positioning in adding value

Inria is a partner of the MUSE (Montpellier University of Excellence) I-Site, whose work centres on agriculture, the environment and health; it shares premises with other partners in the *Directorate* building. Finally, Inria participates in the Numev Labex as well as in an interdisciplinary project funded by the ANR, the "Computational Biology Institute". Inria was also involved in the co-construction of the Agropolis foundation's "Digital Plants and Ecosystems" programme. After the closing of the joint CIRAD-INRA *Virtual Plants* project team, the Montpellier was left with four project teams, including three in the LIRMM, one of the largest CNRS-University of Montpellier UMRs (mixed research units). The joint research teams have successfully developed technologies that have given rise to high-impact consortia, such as *Pl@ntnet* supported by the Agropolis foundation, or to technology startups like the recently created *Neurinnov*. Finally, the possibility of creating entities that stretch across several UMRs gave rise to the creation of the multi-disciplinary Lemon project team on original themes, here, on the modelling of the coastal environment and the flood risk.

Scientific objectives

Medicine, biology, ecology, the environment and agronomy are the area's themes that benefit from the greatest international visibility. It is of course in relation to these themes that Inria will seek to develop multi-disciplinary research projects based on digital sciences. This priority will involve, in particular, a stronger partnership with the INRA and greater involvement in the DigitAg convergence lab, as well as Inria's active participation in the ISDM (Montpellier Data Science Institute).

Objectives related to economic impact

Inria's objective is to develop its economic impact through several actions to the benefit of all the actors in the area involved in digital technology, as part of its strategic partnership with the University of Montpellier:

- identification and implementation of several industrial partnerships, for example with firms like *Bausch & Lomb*, *Sanofi* and *IBM*;
- implementation and opening to the site's partners of the *Inria Startup Studio* scheme for supporting DeepTech digital startups, with a target of 5 startup projects a year by the end of the *Objectives and Performance Contract* (COP), in line with the focus on the *AgTech* and *FoodTech* fields and in conjunction with the *French Tech* hub.

Annex no. 2 – Recapitulatory of indicators & milestones

INDICATORS

AXIS	OBJECTIVE	INDICATOR	METHOD OF CALCULATION	REFERENCE VALUE	TARGET VALUE (2023)
AXIS 1: BUILD SCIENTIFIC, TECHNOLOGICAL AND INDUSTRIAL LEADERSHIP WITHIN AND BY MEANS OF THE DIGITAL WORLD, BOTH IN FRANCE AND IN EUROPE	Maintain scientific excellence	A1: preparation time for the creation of a new project team		18 months	4 months from 2020
		A2: number of ERC grants obtained by Inria project teams			
		A3: ratio between the number of incentive schemes encouraging risk-taking started during the year and the total number of research teams			10% in 2020
		A4: number (or ratio) of project teams active in interdisciplinary projects			
		A5: number of project teams with a development engineer assigned to it long term, due to their technological intensity (4 years as a guideline)			
		A6: ratio of the number of PhD students to the number of permanent researchers in the project teams (regardless of funding sources)			
	Increase Inria's economic impact			0%	10% of joint project teams with companies by 2023
		B1: number of medium to long-term strategic partnerships with France-based companies		0%	50% of major Inria actions (25 over the period) co-constructed with one or more companies over the period 2019-2023
		B2: number of projects to create/support technology companies			100 projects a year supported by Inria Startup Studio by 2023
		B3: number of staff on limited term contracts (PhD students, postdocs, engineers) who join France-based companies and ratio to the number of limited term contract staff leaving			
		B4: number of person who have undertaken an Inria continuing education course in digital science and technology, in particular in connection with the dissemination of open source software			
		B5: number of items of open source software disseminated to companies with a proven impact (existence of a consortium or a significant community of users)			10 items of open source software with a global impact launched by Inria or a continuing education subsidiary by 2023
	Create an efficient and smooth-running organisational structure	C1: percentage of women in the project teams			30% female project team leaders by 2023
		C2: percentage of disabled employees at Inria			6% disabled employees at Inria by 2023
		C3: the Institute's environmental impact indicators, such as its carbon footprint			
		C4: quality of life at work indicators			
	Reinforce Inria's contribution to public policy	D1: number of visitors in joint actions with the CCSTs (scientific and technological culture centres), including <i>Universcience</i>			
		D2: number of school pupils attending a talk by a member of a Inria project team			one school year reached by the "Chiche" scheme in 2023.
		D3: public awareness of Inria measured by a survey in France and Europe			prompted awareness of the general public over 20% by 2023

INDICATORS

AXIS / OBJECTIVE	INDICATOR	METHOD OF CALCULATION	REFERENCE VALUE	TARGET VALUE (2023)
AXIS 2: CONTRIBUTE TO THE DEVELOPMENT OF MAJOR WORLD-LEVEL UNIVERSITY RESEARCH SITES	E1: <i>ratio</i> /number of joint project teams with higher education and research institutions under Inria management			90% over by the second half of 2020
	E2: number of site agreements setting up an "integrated University Inria centre"			6 by the first half of 2021
	E3: indicators showing Inria's involvement in training			
	E4: number of joint recruitments by Inria and its partners (Inria Starting Faculty Position)			
AXIS 3: CAPACITY TO BUILD A FUNDING TRACK	F1: amount of Inria's funding that comes from Europe (excl. ERC).			€15M in 2023
	F2: amount of Inria funding provided by the <i>Inria Foundation</i>			€75M over the period

MILESTONES

AXIS	OBJECTIVE	MILESTONE	MILESTONE DATE
AXIS 1: BUILD SCIENTIFIC, TECHNOLOGICAL AND INDUSTRIAL LEADERSHIP WITHIN AND BY MEANS OF THE DIGITAL WORLD, BOTH IN FRANCE AND IN EUROPE	Maintain scientific excellence	Milestone 1: Inria will detail the content of the qualitative analysis report on its scientific impact that it will produce each year	by June 2020
		Milestone 2: Inria will present to its Board of Directors all its internal support mechanisms, specifically highlighting the simplification measures taken and their impact	first quarter of 2021
		Milestone 3: Inria will renew its framework agreement with Public Science and Technology Institutes (EPSTs) (INSERM, future INRAE, etc.) and industrial and commercial public establishment (EPICs) (CEA, IFPEN, etc.) to introduce joint arrangements (project teams and schemes to foster research, software development and the creation of startups (DeepTech), within the framework of Inria's application priorities (digital health, precision agriculture, energy)	before the end of 2020
		Milestone 4: Inria will include in its procedures for creating and renewing project teams the possibility of having a development engineer who is assigned to the team for the duration (4 years, as a guideline)	second half of 2020
		Milestone 5: Inria will present to its Board of Directors a policy on its computing resources, in line with its national dimension and its site policy	first quarter of 2020
		Milestone 6: Inria will set up a monitoring unit in Brussels dedicated to digital technology, which ties in with other French initiatives on the same subject (<i>Clora</i> , plans for a "French Science Centre", etc.) and where the work will be shared with its partners under its site policy	first half of 2020
		Milestone 7: Inria will sign a strategic partnership with players from German academia (first and foremost the DFKI) under the framework of the French-German strategy on AI	second half of 2020
		Milestone 8: Inria will present its Board of Directors with its policy on strategic international partnerships, with a first list of these partners	first half of 2020
		Milestone 9: Inria will present its Board of Directors with a "welcome package" to be given to the young scientists it recruits, starting with the 2021 campaign	in 2020
		Milestone 10: Inria will present its Board of Directors with a new payscale taking account of "functions, constraints, expertise and professional commitment" (RIFSEEP) for its research staff	in 2020
		Milestone 11: Inria will set up a standing "Search committee" to enhance its international appeal on subjects identified as strategic	first half of 2020
		Milestone 12: Inria will launch a programme entitled "Inria Starting Faculty Position", based on its existing SRP scheme, as part of its site policy, jointly with its major university partners, which will be followed up the year after with an evaluation of its initial results	in 2020, then in 2021
		Milestone 13: an upgraded version of the project team evaluation process, proposed by the <i>Inria Evaluation Committee</i> , will be presented to the Board of Directors and then to the HCERES for validation	From 2020 onwards
		Milestone 14: measures enabling better account to be taken of risk-taking and the diversity of activities and careers when evaluating researchers will be implemented after consultation with the <i>Inria Evaluation Committee</i>	From 2020 onwards
	Increase Inria's economic impact	Milestone 15: <i>Inria Startup Studio</i> will be set up in practice on all the sites where Inria is present, under the agreement with <i>Bpifrance</i> and the site policy. The scheme will be presented in detail to the Inria Board, with development scenarios to ensure its financial sustainability	first quarter of 2020
		Milestone 16: Inria will set up an un-going training scheme, which may at a later stage give rise to a plan for a subsidiary, which will be put forward for the Board's approval	second half of 2020
		Milestone 17: With its European partners Inria will put forward a proposal to upgrade the W3C Europe Hub to the European Union	first half of 2020
		Milestone 18: Inria will present to its Board of Directors a sustainable strategic development scenario for Inria Chile, devised jointly with its Chilean partners, first and foremost <i>CORFO</i>	in 2022

MILESTONES

AXIS	OBJECTIVE	MILESTONE	MILESTONE DATE
AXIS 1: BUILD SCIENTIFIC, TECHNOLOGICAL AND INDUSTRIAL LEADERSHIP WITHIN AND BY MEANS OF THE DIGITAL WORLD, BOTH IN FRANCE AND IN EUROPE	Create an efficient and smooth-running organisational structure	Milestone 19: Inria will place greater value in particular on the annual recruitment of PhD students into its project teams and those with an entrepreneurial project, and will set up a specific event (appointment, sponsorship, etc.)	from 2020 onwards
		Milestone 20: Inria will present to its Board of Directors, annually, the actions it has taken to reduce its carbon footprint	from 2020 onwards
		Milestone 21: Inria will present to its Board of Directors, annually, the actions it has taken as part of its policy of attracting new talent, its disability plan and to reinforce management culture within the Institute	from 2020 onwards
		Milestone 22: Inria will present an annual progress report on the setting up of global projected management of jobs and skills system	from 2021 onwards
		Milestone 23: Inria will present to its Board of Directors, annually, the forward planning work undertaken jointly with its collective bodies (in particular the Scientific Council and the Evaluation Committee)	from 2021 onwards
		Milestone 24: Inria will present to its Board of Directors, annually, the actions taken as part of its digital transformation, including the setting up of a BI system to enable more effective running of the Institute, in particular with respect to its research and innovation policy	from 2020 onwards
		Milestone 25: Inria will present its Board of Directors with a finance plan for its property plan	in 2020
	Reinforce Inria's contribution to public policy	Milestone 26: Inria will take part in the work entrusted to the CCNE (national ethics advisory council) on the setting up of a digital ethics committee	from 2020 onwards
		Milestone 27: Subject to final agreement, Inria will be in charge of an international centre of expertise on AI backed by the GPAI (<i>Global Partnership on Artificial Intelligence</i>)	
		Milestone 28: Inria will set up an operational follow-up for the <i>TransAlgo</i> project on controlling algorithms, jointly with the DGE (Directorate-General for Enterprise)	
		Milestone 29: Inria will present to its Board of Directors, annually, the impact metrics of its science communication activities, in particular through the joint actions with <i>Univscience</i> and projects in schools (e.g. <i>Class'Code</i> and <i>Chiche</i>)	from 2020 onwards
		Milestone 30: Inria will present to the European Commission's Directorate-General for Research a project on the integration of <i>Software Heritage</i> into open science actions	first half of 2020
		Milestone 31: Inria will present to its Board of Directors an action plan to strengthen its partnerships in the Security-Defence sphere	second half of 2020

AXIS / OBJECTIVE	MILESTONE	MILESTONE DATE
AXIS 2: CONTRIBUTE TO THE DEVELOPMENT OF MAJOR WORLD-LEVEL UNIVERSITY RESEARCH SITES	Milestone 32: Inria will present its Board of Directors with scenarios for the creation of a new research centre in Lyon	second half of 2020
	Milestone 33: Inria will present its Board of Directors with scenarios for the creation of Inria branches in Montpellier and Strasbourg, as a priority as part of a partnership with the IHU (university hospital institute)	before 2023
	Milestone 34: Inria will set up at each of its centres of a significant size and an appropriate programme of activities aimed at the entrepreneurial ecosystem, in line with its site policy.	first half of 2020

Research Centres in France



Inria

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