

Germans Trias Recerca



STRATEGIC PLAN
2014 - 2017





CONTENTS

Introduction

- Justification and premises for the Strategic Plan
- Structure of the Strategic Plan
- Participatory strategic planning process

Structure of the Strategic Plan

- Drawing up the Strategic Plan
- Priorities of the Strategic Plan

Diagnosis

Drawing up the Strategic Plan

- Mission and vision
- Strategic scopes
- Strategic focal points and lines of action

SCOPE 1: RESEARCH

- Focal point 1: Defining a research model based on interaction between specialist areas of the campus and future trends
- Focal point 2: Fostering a culture of attracting and retaining top-end talent
- Focal point 3: Rolling out strategies and policies that boost the effectiveness of research and knowledge transfer activity

SCOPE 2: LOCAL AREA

- Focal point 4: Ensuring that both research activities and results are actively and effectively disseminated, along with the services and activities of the institution and of its component centres
- Focal point 5: Increasing the campus' degree of internationalisation
- Focal point 6: Defining and championing a scheme of functional coordination between all campus institutions

SCOPE 3: ORGANISATION, RESOURCES AND SERVICES

- Focal point 7: Attaining excellence, efficiency and sustainability across all the Institute's processes and activities
- Focal point 8: Ensuring ongoing sustainability and improving fund-raising
- Focal point 9: Defining a strategy for the Institute's technical-scientific services that not only consolidates and strengthens them but also renders them more sustainable.

APPENDICES

- APPENDIX 1: External analysis
- APPENDIX 2: Planning
- APPENDIX 3: Parties involved in drawing up the Strategic Plan



INTRODUCTION

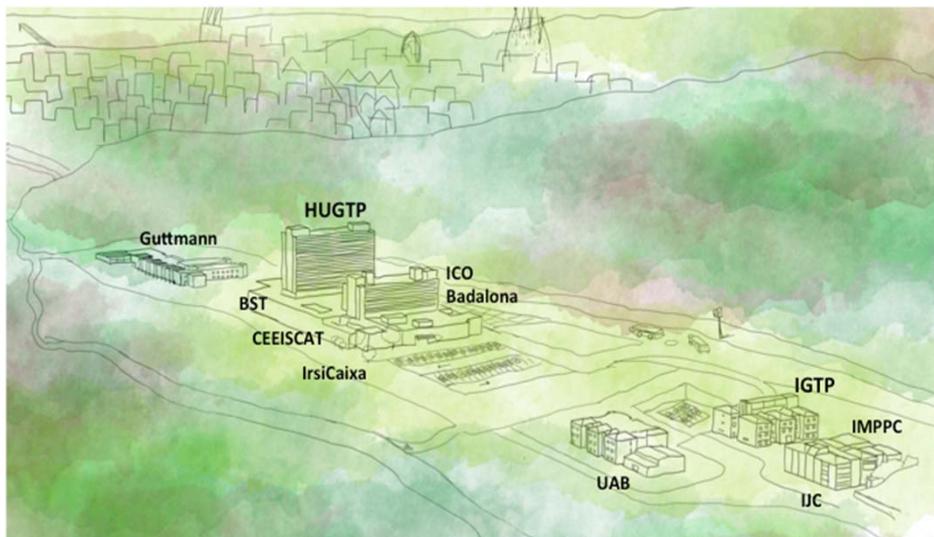
JUSTIFICATION AND PREMISES FOR THE STRATEGIC PLAN

Institut d'Investigació Germans Trias i Pujol (IGTP) is a research centre attached to a university hospital within a biomedical campus. The Institute must ensure that its strategic objectives are perfectly defined, while also ensuring its organisational culture is shared by everyone working towards the objectives put forward. Now that the 2008-2012 Strategic Plan has run its course, a new plan must be devised for the 2014-2017 horizon, one that responds to the needs and meets the obligations that IGTP has with society.

The Can Ruti campus is unique in that it is comprised of numerous renowned research institutes, many of which are recognised CERCA centres (research centres of Catalonia). This is a rewarding and welcome characteristic, one that allows the different centres to draw on different synergies, but one that also complicates the global management of the campus, where IGTP has traditionally been the cornerstone and where it is currently required, among other things, to provide cross-cutting service and facilitate a dynamic of coordinated functioning that proves useful to all researchers present on the campus, whatever institution they belong to. The ultimate aim of this is to unlock their maximum research potential applied to health.

The following institutions are present on campus:

- Institut Germans Trias i Pujol (IGTP)
- Hospital Universitari Germans Trias i Pujol (HUGTP)
- Institut Català d'Oncologia (ICO)
- Irsicaixa
- Fundació Lluita contra la SIDA (FLS)
- Institut de Medicina Predictiva i Personalitzada del Càncer (IMPPC)
- Institut de Recerca contra la Leucèmia Josep Carreras (IJC)
- Institut Guttmann
- CEEISCAT
- Banc de Sang i Teixits (BST)
- Universitat Autònoma de Barcelona (UAB)





The Strategic Plan is, moreover, a tool for creating corporate culture, bolstering the structure and meeting the expectations of beneficiaries of IGTP services. In addition, the drafting of a strategic plan that employs a participatory methodology, as indeed is the case here, has afforded us relevant information and created communication channels between the institutions and between key personnel.

The 2008-2012 Strategic Plan came to an end in 2012, prompting us to rethink and reframe the next stage of life for IGTP following a review of the strategic approach drawn up in 2008 and the future challenges that all the research centres on the Can Ruti campus must tackle, particularly IGTP.

Strategic planning is a process whereby an organisation and its place within its local environment are diagnosed, strategic guidelines established and the necessary courses of action set out in order to reach the objectives and desired scenarios.



The Scientific Management has deemed it necessary to prepare the new Strategic Plan as a participatory exercise, intended as a dynamic process that must impact the shared process of setting priorities and also the results the Institute needs to obtain.

The Strategic Plan should not be just further talk; it must serve as a management tool to be put into practice and implemented by the Scientific Management and the individuals responsible for each of the Institute's organisational units, once the plan has been discussed and approved by IGTP's Board of Trustees.



STRUCTURE OF THE STRATEGIC PLAN

This Strategic Plan is based on the information and approaches contained in the following documents, among others:

- *HORIZON 2020 programme*
- *Plan Estatal de investigación científica, técnica y de innovación 2013-2016 (2013-2016 National Plan for Scientific and Technical Research and Innovation)*
- *Pla estratègic de recerca i innovació en salut 2012-2015 (2012-2015 Strategic Health Research and Innovation Plan of the Catalan Government).*
- *Respondent Report of the Knowledge Transfer Study, 2012. European Knowledge Transfer Indicators Survey. Code of Practice Implementation Survey. Interviews with universities and other public research organisations*
- *COSCE report. Analysis of resources dedicated to R&D+i contained in the general budgets of the Spanish State for 2013*
- *Working paper on the strategy towards the smart specialisation of Catalonia (RIS3CAT)*
- *Pla de Salut de Catalunya 2011-2015 (2011-2015 Health Care Plan for Catalonia)*
- *IGTP 2008-2012 Strategic Plan*
- *CERCA IGTP 2013 report*
- *IGTP annual scientific report for 2009, 2010, 2011 and 2012*

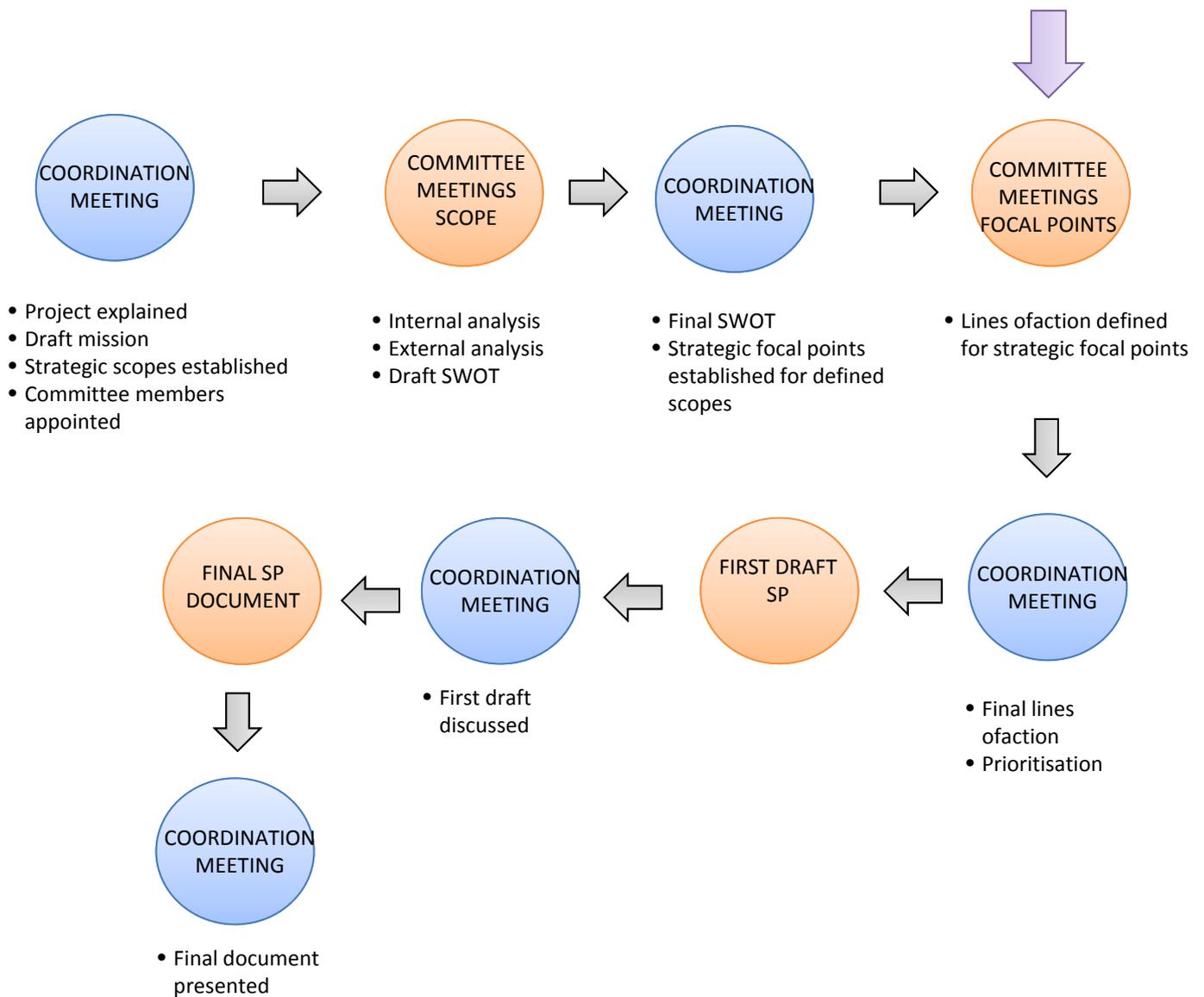


These contents of this Strategic Plan are structured around the following elements:

- **The mission:** defines the Institute's reason for being.
- **The vision:** defines what the Institute aspires to, with a long-term horizon.
- **The strategic scopes:** blocks of content allowing the Institute to structure and group its research activity coherently and cohesively.
- **The strategic focal points:** provide a strategic representation of the priorities that are to guide the activities of IGTP in each of the strategic scopes previously defined.
- **The lines of action:** the actions that must be undertaken and which form the basis and shape of the strategic vision defined in the focal points.
- **The cross-cutting vectors:** must prioritise the strategic focal points and the lines of action if necessary.

PARTICIPATORY STRATEGIC PLANNING PROCESS

The following flow chart provides an outline of how the participatory strategic planning process for the IGTP's Strategic Plan has panned out:

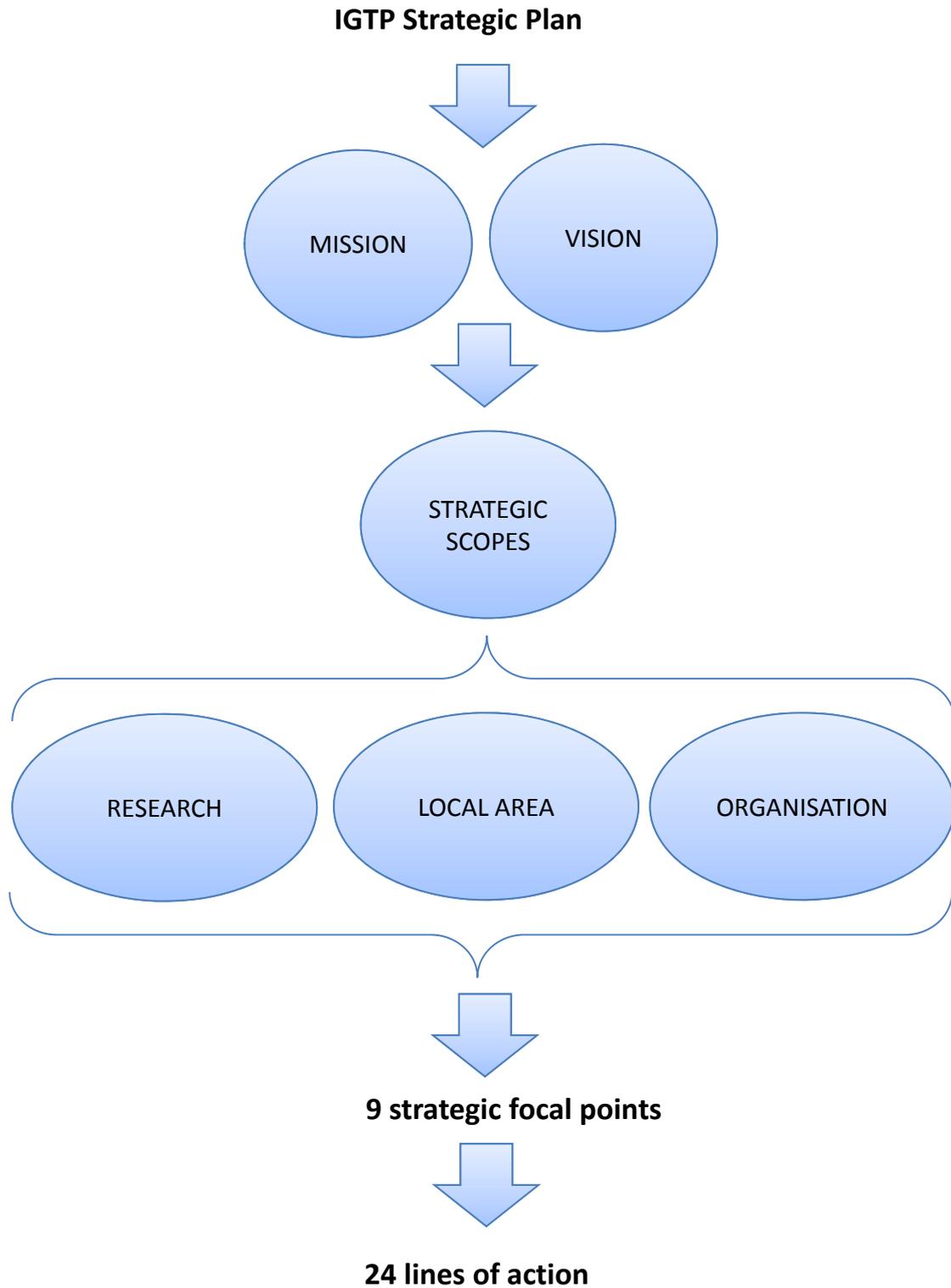




Procedure followed

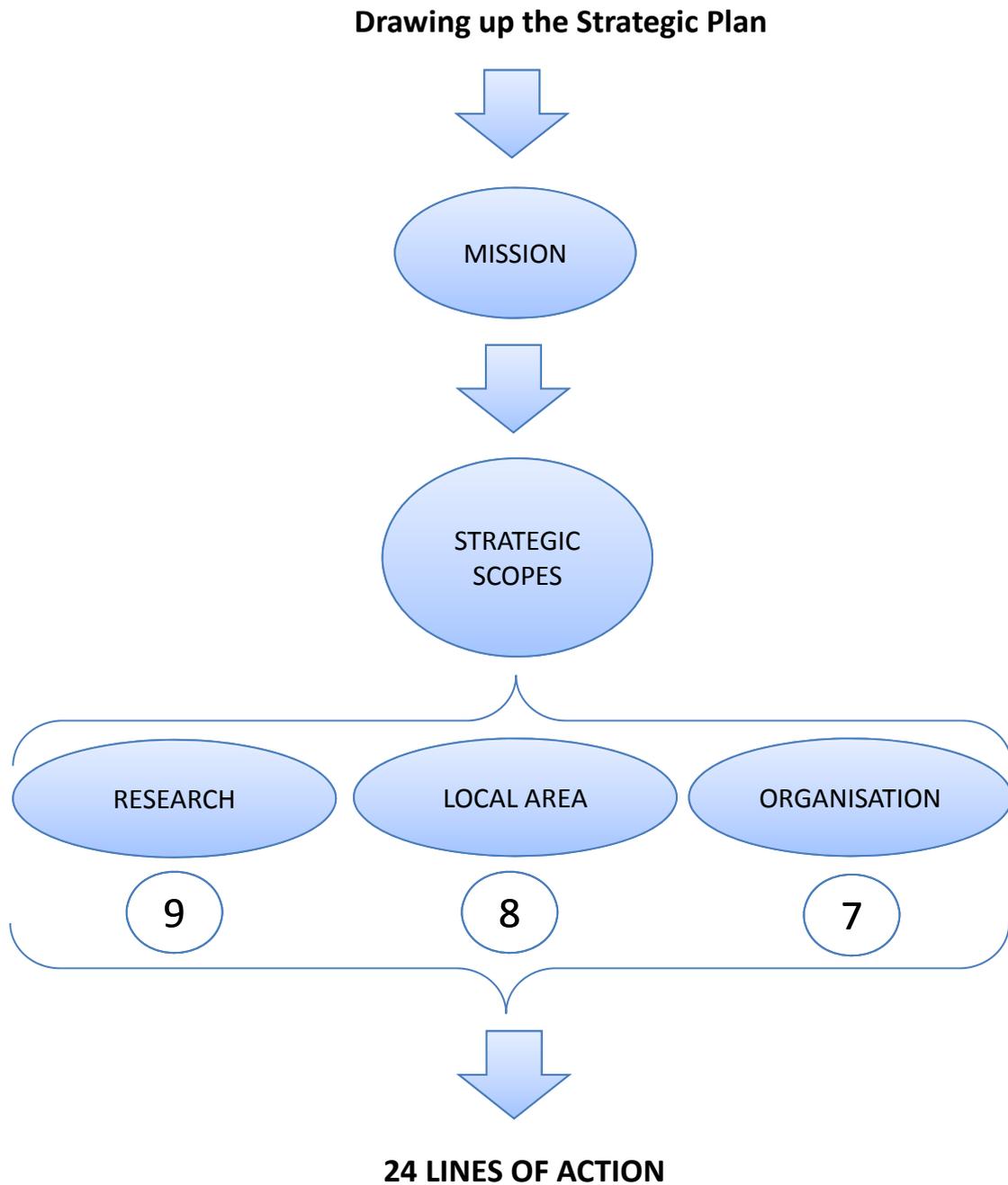
- Coordination committee created:
 - Membership: internal scientific committee bolstered with researchers and members from all the other institutions on campus.
 - Objectives:
 - To share and openly discuss the strategic vision of the Scientific Management
 - To define mission and vision
 - To establish strategic scopes and focal points
 - To validate the SWOT
 - To validate the Strategic Plan
 - On-site participation:
 - 30 January 2014. Methodology presented
 - 13 February 2014. Mission, vision and strategic scopes established.
 - 18 March 2014. SWOT validated and strategic focal points defined.
 - Virtual participation:
 - Week of 21 July 2014. Strategic Plan document validated.
- Committee created for each strategic scope:
 - Membership: Make-up: internal scientific committee bolstered with researchers and members from all other institutions on campus.
 - Objectives: internal and external analysis, and SWOT report
 - On-site participation:
 - 6 March 2014. Research (scope) committee
 - 10 March 2014. Organisation (scope) committee
 - 13 March 2014. Environment (scope) committee
- Committee created for each strategic focal point:
 - Membership: part of the internal scientific committee bolstered with researchers and members from all the other institutions on campus, along with experts in each focal point.
 - Objectives: to establish lines of action. To validate the Strategic Plan
 - On-site participation:
 - 10 April 2014. Services (focal point) committee
 - 28 April 2014. Processes (focal point) committee
 - 28 April 2014. Dissemination (focal point) committee
 - 30 April 2014. Effectiveness (focal point) committee
 - 13 May 2014. Research model (focal point) committee
 - 14 May 2014. Functional coordination (focal point) committee
 - 19 May 2014. Talent (focal point) committee
 - 27 May 2014. Internationalisation (focal point) committee
 - 28 May 2014. Fund-raising (focal point) committee
 - Virtual participation:
 - Week of 21 July 2014. Strategic Plan validated.

STRUCTURE OF THE STRATEGIC PLAN





DRAWING UP THE STRATEGIC PLAN



IGTP's **mission** is to create a multi-disciplinary and multi-institutional environment that opens the gates to highly efficient **translational research** with a view to improving people's **health** and **quality of life**.



Strategic focal points

SCOPE 1: RESEARCH

- Focal point 1: Defining a research model based on interaction between specialist areas of the campus and future trends
- Focal point 2: Fostering a culture of attracting and retaining top-end talent
- Focal point 3: Rolling out strategies and policies that boost the effectiveness of research and knowledge transfer activity

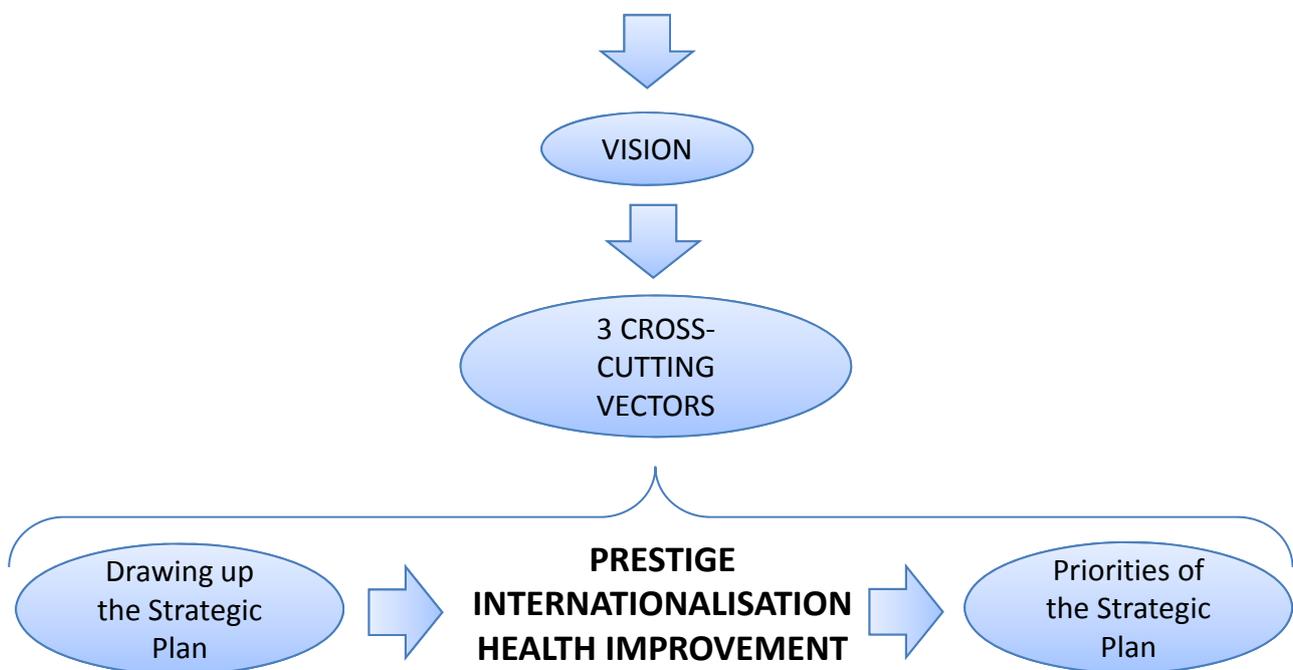
SCOPE 2: LOCAL AREA

- Focal point 4: Ensuring that both research activities and results are actively and effectively disseminated, along with the services and activities of the institution and of its component centres
- Focal point 5: Increasing the campus' degree of internationalisation
- Focal point 6: Defining and championing a scheme of functional coordination between all campus institutions

SCOPE 3: ORGANISATION, RESOURCES AND SERVICES

- Focal point 7: Attaining excellence, efficiency and sustainability across all the Institute's processes and activities
- Focal point 8: Ensuring ongoing sustainability and improving fund-raising
- Focal point 9: Defining a strategy for the Institute's technical-scientific services that not only consolidates and strengthens them but also renders them more sustainable.

Priorities of the Strategic Plan



The **vision** of IGTP is to remain a **prestigious** biomedical research centre and become a benchmark not only in Catalonia but worldwide; a centre that helps **improve the health** and **quality of life** of people by relying on sustainability, excellence, professional expertise and the **technological transfer** of its research.



DIAGNOSIS

The Institute has been analysed both externally and internally based on the documentation consulted and the specific meetings held for each strategic scope, thus generating the following SWOT diagnosis:

IGTP must roll out mechanisms to harness the **OPPORTUNITIES** associated with its environment, relating to:

- The existence of public research policies that help to attract talent, transfer knowledge, disseminate results and findings, and foster collaborative research and internationalisation.
- The increase in EU funds for research activities.
- Catalonia's status as Spain's most important biocluster and a benchmark across southern Europe.
- Autonomous community funding of research based on results obtained.
- The possibility of taking part in most H2020 calls, Europe's flagship research funding initiative.
- The potential of H2020 in the participation of SMEs, which account for most of Catalan industry.
- The main income-generating sector for knowledge transfer within the EU is the biomedical sector.
- The increase in knowledge transfer through the creation of technology-based enterprises.

IGTP must roll out mechanisms to combat the **THREATS** associated with its environment, relating to:

- The drop in public funding for research, as reflected in the General Budget of the Spanish State, with the resulting fragmentation of the research ecosystem.
- Prevailing global economic uncertainty.
- The political climate between Catalonia and Spain.
- External competitors.
- The uncertainty shrouding the future availability of researchers and managers of research and innovation.
- The existence of a domestic industrial fabric that is unable to assimilate large development projects.
- Income from technology transfer highly localised in institutions within the EU.
- Difficulty of accessing the decision centres of possible licensee companies.
- Catalan companies have very little dealings with public centres that generate knowledge.



IGTP should focus chiefly on improving its **STRENGTHS**, relating to:

- Impressive presence of multiple research institutions on the same campus.
- Brand image of the Can Ruti campus steadily improving.
- Capacity to generate new areas for knowledge-related synergies within the Can Ruti campus.
- High level of expertise in specific areas of knowledge.
- Groundbreaking lines of research on the international stage.
- Culture of innovation growing within the Institute.
- Catalonia's leading health care centre in terms of patient numbers.
- Research agreement in place with Fundació Jordi Gol i Gorina.
- Accredited and re-accredited by Instituto de Salud Carlos III (ISCIII) as a health research institute; also a CERCA centre (research centres of Catalonia).
- Social dissemination of research undergoing expansion.
- Space available to incorporate new research groups.
- Privileged geo-strategic position of the Can Ruti campus.
- Institutional flexibility.
- Well-structured platforms with growth potential.
- Researchers involved in the mission and vision.
- Currently healthy economic and financial situation of the Institute.
- Banks of biological samples and DNA.
- Structures in place to provide support along the entire development chain for both drugs and treatments.
- e-Learning platform.
- Extensive network of both domestic and international industrial and academic contacts.
- Presence of key opinion leaders on campus.
- Existence of an excellent External Scientific Committee.
- Solid internal communication when it comes to management.
- The new website.

IGTP should focus chiefly on correcting its **WEAKNESSES** relating to:

- Insufficient monitoring and scientific evaluation of the research groups.
- Failed to deploy the knowledge valorisation strategy.
- Internal communication between institutions on campus.
- Insufficient knowledge of the research activities under way among the institutions on campus.
- Insufficient interaction with primary health care researchers.
- Lack of lobbying clout with the Catalan government, the central government and the EU.
- External communication and visibility can be improved on.
- Lack of alliances with research centres not associated with hospitals.
- Poor involvement in international projects (European, NIH, Wellcome Trust, and others).
- Insufficient recruitment of international researchers.
- Staff size and scaling of administrative management.
- Staff size and scaling of project management.
- Insufficient tools to follow up on projects.
- No process management.
- The organisational model.
- Lack of intramural grants.
- Scant knowledge of the technical services present on the platforms by both internal and external users.
- No bioinformatics platform.
- The current Animal Experimentation Centre (AEC), which is obsolete.
- The IT infrastructure.
- Low levels of activity for certain platforms.
- The lack of advance training cycles (post-graduate and master's) recognised within the university realm.
- Insufficient ties with other research institutes and hospitals outside the territory.



DRAWING UP THE STRATEGIC PLAN

MISSION AND VISION

The mission of IGTP can be phrased as follows:

IGTP's **mission** is to create a multi-disciplinary and multi-institutional environment that opens the gates to highly efficient **translational research** with a view to improving people's **health** and **quality of life**.

The vision of IGTP can be phrased as follows:

The **vision** of IGTP is to remain a **prestigious** biomedical research centre and become a benchmark not only in Catalonia but worldwide; a centre that helps **improve the health** and **quality of life** of people by relying on sustainability, excellence, professional expertise and the **technological transfer** of its research.

The mission and vision of IGTP form the cornerstones of its Strategic Plan.



STRATEGIC SCOPES

The strategic scopes create blocks of content that allow the Institute to structure and group together its research activity coherently and cohesively, while also providing the basis for orderly discussion and debate within the research community.

The strategic scopes around which IGTP's Strategic Plan is structured are as follows:

- SCOPE 1: RESEARCH
- SCOPE 2: LOCAL AREA
- SCOPE 3: ORGANISATION, RESOURCES AND SERVICES

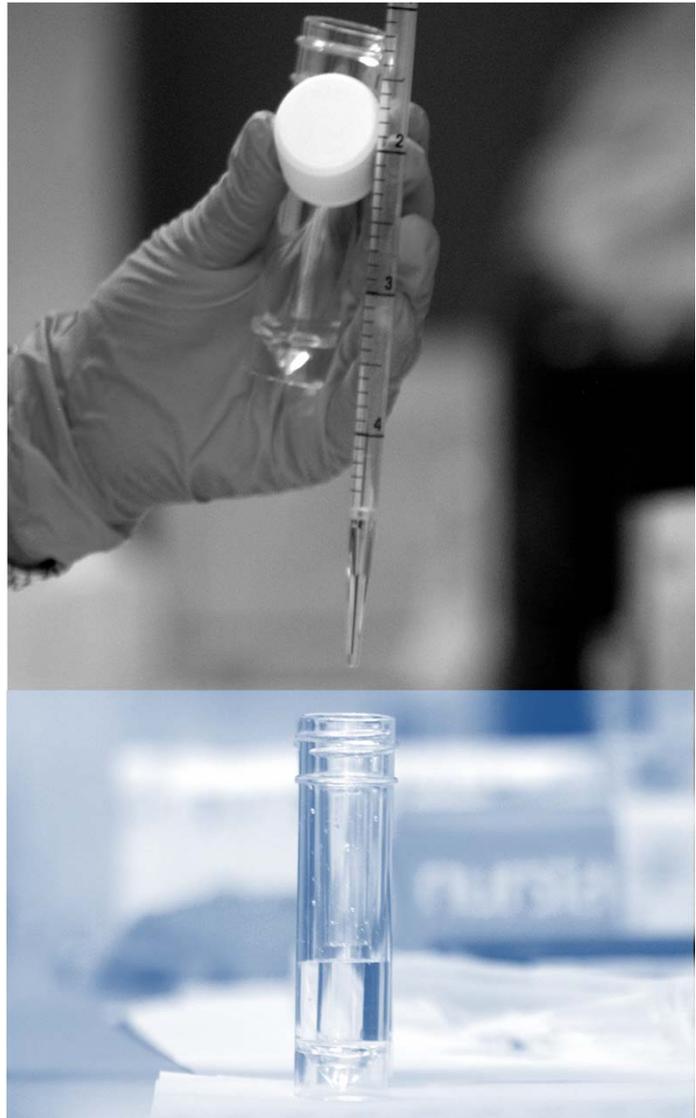


STRATEGIC FOCAL POINTS AND LINES OF ACTION

The strategic focal points provide a strategic representation of the priorities that are to guide the activities of IGTP in each of the strategic scopes previously defined.

The lines of action, on the other hand, are intended to shape and direct the strategic vision formulated in the focal points. Although the aim of this document is to establish timeframes for specific actions, the timing of the operational implementation of all the actions explained below will depend to some extent on the prevailing circumstances, whether political, economic, social, or simply scientific in nature.

The following section provides a brief description of the current status of each of the strategic scopes and of the objectives to be reached in the coming years for each, along with an outline of the strategic focal points and proposed lines of action to be undertaken within IGTP over the 2014-2017 horizon.





SCOPE 1: RESEARCH

Research is one of the core obligations of every university hospital centre and HUGTP is no different. Over the course of its relatively short history (only 30 years), the accredited research work in creating IGTP, among others, has pushed the Can Ruti campus into the national and international limelight as not only a promise of what is to come, but also as an example of excellence here and now. This much is clear from the unwavering commitment towards research shown over the years by successive directors of HUGTP, and also from the scientific expertise and quality of the experts who work on the campus. This has also helped raise the prestige of, and respect for the Institute and its expert staff (care providers, researchers and educators) from the authorities and among patients and peers in the health sector. This commitment has clearly been a sound one that has reaped a great deal in return. First and foremost, we must acknowledge not only the sterling work carried out by the successive management teams, but also, and this cannot be stressed enough, the work of the researchers and leaders that have been created on the campus, without whom none of the progress made to date would have been possible.

Against a testing economic and political backdrop, neither the Institute nor its researchers, nor the heads of the Scientific Management will hold back; we have too much to lose, above all the Can Ruti campus and our patients. In short, a hospital institute that engages in research and provides largely excellent health care. We will continue to implement this model over the coming four years of this new Strategic Plan. It is the only viable model, all the more so given the prevailing crisis, from which only the best will emerge. We, Can Ruti, IGTP and the institutions that share the campus with us, are among the best, and will remain so, not in everything obviously, but certainly in certain disciplines. Proof of this is the fact that we were recognised among the five leading ISCIII-accredited research institutes in 2009 and that in March of 2014 we are again among the first to secure re-accreditation with a score of 95 out of 100. This is therefore testament to our work, although we still have a long way to go, seeing as though the conditions and needs inherent to research are changing rapidly and the political and economic environment and outlook remain plagued with uncertainty. The challenge is indeed great, but so is our confidence in reaching the finish line, largely because of the huge talent of our researchers, this being the critical mass that has taken shape and flourished in our campus over the years. Moreover, and despite the numerous difficulties facing us, our institutions remain committed to ambitious projects, such as the Comparative Medicine Centre at IGTP, the Genome project of Catalonia (GCAT) at IMPPC, and the new centre of the Institut contra la Leucèmia Josep Carreres, an emblematic centre engaged in pioneering research into leukemias and other malignant blood disorders. Difficult times call for brave choices, because only the fittest and most flexible will survive, as Darwin himself would have it.

Over the 2014-2017 horizon, IGTP must strengthen its organisational structures and scientific-technical and support services for researchers from across the campus if it hopes to reach a more visible and prominent position within the Catalan, Spanish and European research communities. The research that will continue to be carried out at the Can Ruti campus and at the IGTP must, above all, be worthy of excellence, with quality coming before quantity and with a clearly translational, innovative and international dynamic to it.

There is a whole raft of hugely prestigious centres working out of the Can Ruti campus, embracing health care, teaching and research, making the campus the perfect venue for attaining excellence in its end product, making the site more visible and boosting its standing. This will in turn generate more confidence among patients, who place their health in our hands and to whom we owe our work.



FOCAL POINT 1

Defining a research model based on interaction between specialist areas of the campus and future trends

Current situation:

The combination of clinical and basic researchers at our campus -roughly 140 principal investigators with a total of 400 people, including scientific support staff, administrative personnel and PIs- and who currently present a ratio of 45-65 %, should allow the translational research generated at Can Ruti to become highly productive. Collaborative research geared towards resolving the problems facing our population, with innovative solutions stemming from the interactions between clinical and basic researchers. The Scientific Management and the different heads of research on campus are required to organise and drive forward all the current capabilities and potential of our research groups, assisting them in their work while also encouraging interaction between the stars of the research world; the researchers themselves.

Research model to be achieved:

The main features of the research model we intend to consolidate and cement over the coming four years through this Strategic Plan are as follows:

- Orientation towards the patient and the health problems facing the population.
- Heavy translational slant.
- Commitment to innovation.
- Cooperative culture across the campus.
- Focus on seeking out international partners and above all, within Europe, on actions associated with the H2020 initiative.
- Alignment with the H2020 philosophy of applying responsible research and innovation criteria

(Project RRI tools: *Building a better relationship between science and society*)





At present, the subject areas and research groups are as follows:

Area 1 - Behavioural sciences and substance abuse

- G1 - Medical complications arising from substance abuse
- G2 - Mental illness study group

Area 2 - Immunology and inflammation

- G3 - Immunopathology
- G4 - Immunology of diabetes
- G5 - Immunological and inflammatory dermatopathies

Area 3 - Heart, vascular and respiratory illnesses

- G6- Heart diseases research group
- G7 - Respiratory diseases research group
- G8 - Thrombosis diseases study group

Area 4 - Infectious diseases

- G9 - Clinical and experimental microbiology
- G10 - Clinical and basic AIDS research
- G11 - Legionella research group
- G12 - Global health and epidemiology of sexually transmitted diseases

Area 5 - Endocrine, metabolic, bone and renal diseases

- G8 - Endocrine disease study group
- G14- Bone and rheumatological disease research group
- G15 - Renal research group
- G16 - Pediatric hereditary metabolic disorders
- G17- Research group into urologic disorders

Area 6 - Liver and the digestive system

- G17- Digestive disorder research group

Area 7 - Cancer

- G19 - Research group into malignant hematological disorders
- G20 - Research group into hepatic and digestive cancer
- G21 - Lung cancer group
- G22 - Breast cancer group
- G23 - Brain tumour research group
- G24 - Skin tumour study group
- G25 - Tumour histopathology group

Area 8 - Neuroscience

- G26 - Study group into cerebrovascular disorders
- G27 - Basic and translational research group in neurosciences
- G28 - Research group into cellular and molecular neurobiology



The creation of the **Predictive and Personalised Medicine for Cancer Programme** is a further highlight, arising from the integration of part of the IMPPC into IGTP. The programme centres on everything related to solid tumours and is articulated through the SUMA IGTP-IMPPC-IJC project. This new programme will have a transversal scope, involving researchers of IGTP and ICO Badalona, in addition to the researchers of the IMPPC given over to the study of solid tumours.

Lines of action and objectives to be met:

1.1 Establishing the cross-cutting research areas

On the basis of the current areas built on knowledge disciplines, the next step will be to define critical cross-cutting areas with a hugely important strategic component, such as ageing, information technologies applied to research and health, human interactome, and so on.

1.2 Classifying the research groups

The definition of research group will be revalued, as will the different types of group, based on modern and internationally standardised criteria.

1.3 Monitoring the research groups

The indicators that define the activity and quality of the research groups will be tracked and monitored by relying on standard and transparent criteria and employing specific valuation instruments.

Appendix 2 to this Strategic Plan provides a full and detailed list of actions associated with these lines of action. In the meantime, the following figure shows the intended timeframe for the lines of action:



FOCAL POINT 2

Fostering a culture of attracting and retaining top-end talent

Current situation:

Although the Institute has mechanisms in place to recruit and retain research personnel and technical and support staff for the researchers, as indeed shown by the increase in researchers and support staff seen over recent years, personnel management needs to be improved so as to guarantee and sharpen the national and international prestige, excellence and competitiveness of the IGTP research system. This room for improvement is chiefly due to the following factors:

- The attractiveness and appeal of the Institute has not been sufficiently addressed by promoting the talent and standing of the different cutting-edge groups present at IGTP and on the campus at large. One of the added values of the Institute, and indeed of the campus, is the prestige and talent shown by different research groups, which translate into a talent pool that can be used to attract further key talent for the Institute. That said, the Institute has failed to tap this strength in order to attract talent. A key priority is therefore to roll out actions to improve visibility and enhance this strength with the aim of attracting and retaining talent.
- There are no active policies at any level to attract and retain talent. Although research and technical support staff have been recruited on an ongoing basis through Catalan and state-level calls, no specific action plans have been put in motion to attain concrete objectives aimed at capturing and retaining talent at all levels, whether this involves recruiting junior, senior or high-level staff.

While training has been strengthened at all levels by planning training initiatives as a means of attracting and retaining staff, there is still no training plan present across all levels of the Institute with specific objectives, whether for research staff, technical support staff or administrative staff, depending on the needs to be covered.

Lines of action and objectives to be met:

2.1 Increasing the exposure and visibility of renowned researchers and research groups present within the Institute and on campus.

This line of action is envisaged in section 4.2 “Preparing a communication plan aligned with all institutions on campus” of the strategic focal point titled “Fostering active and effective dissemination of research activities and results, along with the services and activities of the Institute”.

The IGTP objective for 2017 is **to make the Institute and the researchers more visible**, whether or not opinion leaders, bearing in mind the different component members campus, the ultimate aim being to up the appeal of the Institute when it comes to attracting and retaining talent.

One of the specific objectives of the communication plan to boost visibility will undoubtedly be for the Institute to rely heavily on its e-Learning platform, accomplishing its own online training system by 2017, whether this is administered internally or through collaborations with a university. These types of training platform are on the rise and research centres are becoming increasingly reliant on them.



2.2 Establishing active policies to attract and retain talent.

The 2017 objective of IGTP in this regard is to have significantly increased the critical mass of researchers and to have recruited and retained, insofar as reasonable, researchers at all levels, whether pre-docs, post-docs, junior group leader or senior group leader.

Actions must be undertaken in this regard in relation to the following concepts:

- Strengthening research further with regards to HUGTP services. Through a concerted action with the Scientific Management of IGTP, the management of HUGTP and the different heads of service will be required to roll out a **plan to encourage research in certain services** with a view to strengthening them. Do do so, the current situation of each service will be analysed and professionals with research potential then singled out. The specific objective will be to generate a significant increase in the number of clinical research projects active in the short term. The Institute shall assist and provide guidance to potential researchers flagged through this process who are keen to undertake research projects, affording them access to fund-raising mechanisms and offering them technical and administrative support under the tutelage of researchers with proven experience and the Scientific Management team itself. Moreover, in relation to the process of **selecting the new heads of service of HUGTP**, the research committee of IGTP and/or of the campus and the Scientific Management must assess the suitability of the candidate from a research-related standpoint, and this shall be the determining factor when selecting the chosen candidate.
- Developing a **post-graduate scheme for translational biomedical research** to attract university graduates looking for a career in research. This postgraduate course must be aligned with the knowledge that is generated and developed on campus and must be transversal with all the services of HUGTP so that on completion the graduates can fit into any of the research groups of IGTP and/or of the campus. That said, the course should not compete with other similar schemes on site, meaning a preliminary study will be needed to detect as-yet uncovered training needs. On this point, the future Comparative Medicine and Bioimaging Centre (CMBC) could help identify training niches that have yet to be covered by other centres on campus. Pupils will have to be able to finance their enrolment through collaborations with industrial partners or patronage, among other possible options.
- Making the research centres of the campus more visible to **attract medical school students**. Practically none of the medical students on the Can Ruti campus are keen to follow a career in research, so to combat this state of affairs the Institute has deemed it necessary to undertake actions to raise exposure, such as including more material on the research activities found on campus on the faculty's notice board, giving talks to promote research in the teaching unit, and strengthening, through IGTP, the recently created optional research module ("Principles of clinical research: methodology, ethics and regulation") as part of the degree course.
- **Securing group leaders and international research staff** The strategy would involve attracting researchers through different mechanisms, such as ICREA (Catalan Institute of Research and Advanced Studies), as it is considered to have the necessary resources (research resources and basic group structure in place: space, pre-doc and post-doc investigators and technicians). Other plausible mechanisms for attracting talent would be implemented through international doctorate courses (joint doctorate) or mobility and talent recruitment programmes (staff exchange, individual fellowships).



- Nevertheless, a framework of facilities would have to be created to enable the researcher to adapt easily to his or her new environment, thus increasing the Institute's ability to attract talent. A network of international contacts would also be set up to attract potential researchers and offer them positions within the Institute.
- **Attracting local talent** Undertaking the actions necessary to recruit, as IGTP research associates, the tenured researchers attached to Hospital de Mataró and Hospital de Badalona, along with those researchers recognised by Fundació Jordi Gol i Gorina who work in the Metropolitana Nord territory.
- Drawing up a **training plan** for Institute personnel. As a further means of retaining talent and ensuring continuous improvement, a training plan must be rolled out across all levels of the Institute with specific objectives, whether for research staff, technical support personnel, or administrative staff, depending on the needs to be covered.



- Yet key to achieving this is having a head of human resources, and there is currently no such position. It will, however, be addressed in the functional restructuring to be carried out within the framework of this Strategic Plan, as detailed in action 7.2 of the strategic focal point titled 'Attaining excellence across all the Institute's processes and activities'.

Appendix 2 to this Strategic Plan provides a full and detailed list of actions associated with these lines of action. In the meantime, the following figure shows the intended timeframe for the lines of action:



FOCAL POINT 3

Rolling out strategies and policies that boost the effectiveness and efficiency of research and knowledge transfer activity

Current situation:

At present, the health sector and associated technologies reach out to a wide range of end markets, ranging from ICTs to biomedicine, and taking in medical devices and services associated with medical practice. This effectively means that there is much value to be unlocked and knowledge to be transferred within this sector.

Innovation activities within the health sector should be viewed on two levels:

- Type 1: Transfers to third parties (licences) and creation of technology-based companies.
- Type 2: This transfer essentially entails an across-the-board improvement of the health system (streamlining of resources, improvement in the cost/effectiveness of the system) and in the treatment of patients.

This differentiation is a product of the characteristics of a system based on public health care for everyone, one that not only attempts to profit directly from the exploitation of research activities (type 1), but that also strives to employ research findings to bring about global improvements to the system so as to generate integral solutions in the health system, whether by:

- improving clinical practice,
- improving diagnosis in early risk groups and patient treatment,
- improving procedure through clinical guides and health care management.

In addition, numerous initiatives such as the ITEMAS network and those promulgated by Fundació CERCA and ACCIÓ are being rolled out and developed to champion the transfer and valorisation of knowledge within the health sector.

Yet it is still relatively uncommon to see fully implemented models wherein knowledge within hospitals and the health care industry is systematically valorised so as to guarantee returns on investments made in research and to make public health care more competitive, while also turning hospitals into veritable production centres of wealth and well-being.

Therefore, although the Institute does indeed have mechanisms and procedures related to the transfer of knowledge, as demonstrated by the number of patents filed, the technology-based companies created and its collaborations with other companies, the way these are managed must still be improved so as to guarantee that the transfer and valorisation of knowledge becomes a systematic process, not a one-off exercise. This room for improvement is chiefly due to the following factors:

- There has been no attempt to enhance the transfer and valorisation of knowledge from the various cutting-edge groups present within the Institute and on campus. IGTP has an extensive stock of knowledge tied to its research groups and also tied to HUGTP. However, the Institute has failed to build on this strength in order to systematise innovation and knowledge transfer processes. Where this has occurred, it has happened spontaneously. A key priority is therefore to roll out actions to enhance this strength with the aim of improving the transfer and valorisation of knowledge.

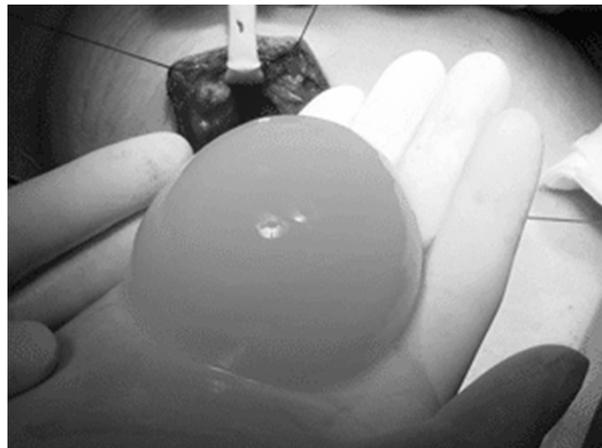


- No policies relating to the management of industrial and intellectual property have been defined. There has been no indication of which rules and policies apply when it comes to industrial and intellectual protection, nor any indication of the policy for allocating exploitation rights or for creating technology-based companies.
- Shortage of funds to protect knowledge and carry out proofs of concept. A lack of funds needed to administer industrial property (primarily patents) and intellectual property accordingly, as well as funds to carry out proofs of concept and valorisation in order to bring the knowledge generated to the market, has limited the opportunities for transferring and valorising the knowledge generated at IGTP.
- Lack of a proper support structure for researchers, preventing them from engaging fully in knowledge transfer activities. The shortage of support staff has certainly limited knowledge transfer and valorisation work.

Although there have been external services to provide ad hoc support to researchers, the absence of a stable structure has made the task of transferring and valorising knowledge all the more difficult. Likewise, while training has been strengthened at all levels by planning training initiatives, there is still no concrete training plan in place to deal with all aspects concerning the protection and exploitation of research results and with specific objectives, whether for research staff, technical support staff or administrative staff, depending on the needs to be covered.

In short, this Strategic Plan must serve to improve and systematise:

- protection of intellectual and industrial property,
- training in specific areas of innovation,
- support in the creation of spin-offs and licensing,
- internal dissemination actions to stimulate new ideas and innovations,
- external dissemination actions to position the Institute as a benchmark centre in the field of biomedical research,
- fostering interaction and closer ties with the different agents operating within the system, particularly companies, with the aim of improving public-private partnerships,
- drawing up clinical and therapy guides and procedures.





Lines of action and objectives to be met:

3.1 Systematising the process of valorising and transferring knowledge.

This line of action is envisaged as the central action that will allow us to systematise the process of transferring and valorising knowledge within the Institute.

The IGTP target for 2017 is to make the Institute and its researchers more visible, whether or not opinion leaders, and to portray it as an innovative institution, prompting a high number of research groups to engage systematically in knowledge transfer and valorisation activities (generation of patents and transfer of these to third parties, creation of technology-based companies, and fostering innovation within HUGTP to improve clinical practice).

Actions must be undertaken in this regard in relation to the following concepts:

- Updating the **procedures associated with the accreditation** of health care institutes attached to ISCIII based on the new working procedures and methodologies.
- **Creating a support structure for knowledge transfer and valorisation.** This action will involve recruiting expert personnel and arranging specific services linked to the valorisation and transfer of knowledge. These external services will primarily take the form of legal advice, advice relating to knowledge protection, and specialist consultancy relating to market studies and valorisation strategies.
- **Systematising and identifying the Institute's stock of knowledge.** Information structures must be established (databases, technological offers, etc.) to be able to identify and categorise the value potential of the ideas, inventions and research results of the Institute's staff. The result will be a inventions pipeline that indicates project maturity and potential for being transferred to the market. Specific strategies will also be established with the different research groups, particularly with those that have a greater stock of knowledge but no specific strategies in place to exploit and valorise this pool.

The following information will therefore be compiled systematically:

- Pipeline prepared of all projects.
- List of patents (existing, in progress and planned).
- Map of potential partners/licensees.
- List of trade fairs, congresses, partnering events, etc.
- Databases with market data and studies.

The following minimum documents will therefore be generated:

- Project assessment form.
- Legal documents, the most important being Material Transfer Agreement (MTA), Confidential Disclosure Agreement (CDA), Term Sheets, Master Service Agreement (MSA), and collaboration agreements.
- **Promoting the effective transfer of technology in the interests of health and research:**
 - Facilitating the transfer of scientific research results by defining suitable strategies for each technology or procedure. Each technology that can be transferred must have its own route sheet.
 - Working and collaborating with companies on new products and taking part in joint R&D+i projects.



- **Establishing mechanisms to ensure due protection of research results.** A policy will be deployed to protect intellectual and industrial property, while knowledge financing will be systematised. Likewise, strategies will be prepared to render the technologies mature once protection has been obtained, indicating the ideal transfer point and the steps to follow to attain this objective through route sheets. To guarantee proper protection of research results, project management will be optimised and project potential will be analysed and framed in terms of protection and valorisation to ensure the stock of knowledge and its innovation potential are correctly identified. Similarly, an estimate will be reached of the funds required to ensure sufficient resources are earmarked for knowledge protection.

The following documents therefore need to be prepared to systematise the protection process:

- Invention disclosure form.
 - Application/authorisation form for industrial and/or intellectual protection.
 - Authorisation form for scientific publication.
- **Systematising both internal and external communication of innovation** Steps will be taken to promote the active and effective dissemination and disclosure of activities aimed at transferring knowledge and results, positioning and publicising them both internally and externally. In this regard, our involvement in trade fairs, congresses and forums for transferring and valorising knowledge will play a key role in helping to reposition the Institute and its stock of knowledge, creating a concept of innovation linked to the 'Can Ruti campus' brand. Likewise, we will raise the exposure and visibility of the different groups working on campus and their work in innovation so as to attract companies and encourage partnerships. Thus, appropriate steps must be taken to increase their visibility within the industrial sector, and events arranged to showcase the research at specialist forums or at the Institute itself, among others.

3.2 Establishing policies to manage ownership and exploit knowledge.

The Board of Trustees shall define and approve rules and regulations to govern the management of the industrial and intellectual property of IGTP, along with the policy and regulations for exploiting knowledge and creating technology-based companies.

Institute staff will be made familiar with this policy, which will also be made public for third parties. Actions must be undertaken in this regard in relation to the following concepts:

- Drafting and approving the different regulations governing the protection and valorisation of the stock of knowledge.
- Drawing up regulations for creating technology-based companies (TBC), which will describe the steps to be taken and the minimum information needed to ensure approval by the Board. These regulations will include an application form for requesting the creation of a TBC.



3.3. Establishing a training plan to cover the transfer and valorisation of knowledge.

So as to facilitate the involvement of staff and improve the procedures in place for transferring and valorising knowledge, a training plan is considered essential, covering the different aspects and facets of such activities (protection, licenses, creation of TBCs, etc.). Thus,

- A training plan will be devised for Institute and hospital staff alike with the aim of furthering innovation. The plan will be intended for both health care staff (doctors and nurses) and research staff, including technical support and administrative staff, depending on the needs to be covered.

3.4. Championing clinical innovation and initiatives associated with social entrepreneurship.

One of the main objectives of valorising knowledge linked to biomedical and clinical research is to improve the health of the population.

So, translating the research results towards clinical practice and society, and incorporating into health care services those measures that improve the population's health at all levels are both core aspects of the mission of the different institutions that form part of the Can Ruti campus.

One of the basic actions to be undertaken within this Strategic Plan is to establish a line of transfer that centres on impact investing, meaning investments that have a clear impact on society.

If these objectives are to be accomplished, HUGTP must be involved in all processes relating to innovation.

The following activities will be carried out within the context of this action over the life of the Strategic Plan:

- Implement a process whereby cost-effectiveness analyses can be conducted and SROI (social return on investment) calculated for those actions needed to bring about changes in clinical practice.
- Define SROI indicators.
- Weigh up the merits of creating an Innovation Department at the hospital, either attached to or run from IGTP.
- Involve patient associations to improve organisation and clinical practice.
- On the subject of health care innovation, involve all professional stakeholders (primary care, patients, health care manager, companies).

Appendix 2 to this Strategic Plan provides a full and detailed list of actions associated with these lines of action. In the meantime, the following figure shows the intended timeframe for the lines of action:



SCOPE 2: LOCAL AREA

All research centres have the massively important role of generating, transferring and also disseminating knowledge. So, for IGTP to improve its standing and become a benchmark centre in Catalonia and indeed worldwide, we need, among other things, policies geared towards active and effective dissemination and promotion of its research activities and results.

It is also paramount to achieve and cement a unified brand image that embraces all the institutions that lie on campus.



Similarly, the location and geographical proximity, and the institutions and the activities undertaken at Can Ruti in terms of health (health care, teaching and research) all combine to create an ideal environment from which to contextualise, in explicit fashion, a health-oriented campus that offers all the advantages these aspects bring. It is for this reason that we now need to take action to optimise the campus' resources and establish and strengthen research synergies between all the different component members.

Lastly, for a research centre the size of IGTP, internationalisation is an overriding strategic need. Globalisation has opened the doors for small- and medium-sized research centres to interact in all areas with other centres located in Catalonia, Spain and, above all, outside Spain. Although it is clear that efforts have been actively made in this field, the time has now come to tackle the issue of IGTP internationalisation from a global standpoint through a specific strategy.



FOCAL POINT 4

Ensuring that both research activities and results are actively and effectively disseminated, along with the services and activities of the institution and of its component centres

Current situation:

Despite the fact that the Institute has mechanisms in place to disseminate its research activities, research results, services on offer and other types of activities, these need to be better managed to ensure their effectiveness and thus garner the social, scientific and political recognition for the Institute in line with its mission. This state of affairs is chiefly due to the following factors:

- There is **no unified framework uniting** all the institutions on campus. One of the peculiarities of IGTP is that it lies within a unique research site for the region; one comprising a prominent hospital, various pioneering research centres and the university. The Scientific Management believes that harnessing and building on this unusual configuration would be a strategically sound move, and one that requires us to **construct and consolidate a global image of all the institutions present on the campus**. This commitment has been well received by the institutions in question, although we must still construct a sturdy shared platform from which everyone feels represented. This concept is currently going by the name of **Campus Can Ruti** within the campus, although this is far from official or even known further afield. At a later stage, it will be necessary to set up a common model for communication for the entire campus and a common framework for using the associated brand.
- Lack of visibility. The Can Ruti mountain in Badalona, right in the heart of the Serra de la Marina mountain range, has gradually transformed over the years to become what it is today: a benchmark for health and research in Catalonia. An impressive site to be sure, yet one that is not particularly well known among the public despite being a reference point for research throughout Spain. We must therefore strive to bring our knowledge and good standing closer to the people, who are after all the ultimate objective and mission of the Institute. Making the general public and all stakeholders, such as patient associations, more aware of the centre's activities is considered a key priority.
- The Institute has no communication plan or any kind of common approach to communication with the other institutions on campus. Although periodic actions to disseminate and raise awareness have been taken both internally and externally, they have never been articulated through a communication plan and the Institute has neither the resources nor made the investment in the resources needed to optimise these actions. There is currently no specific head of communication within the Institute, although the person responsible for external communication actions is the head of communication of HUGTP (press releases, relations with the media), while internal communications are handled by an administrative support employee (newsletter, Twitter, new website). There is therefore a shortage of resources for improving communication, especially the external kind.

Prior to the arrival of the new Scientific Management, the communication policies of the different institutions on campus were uncoordinated with no common procedure. Moreover, no working committee had been set up with the aim of sharing and coordinating experiences and activities among the institutions. Recently, however, working meetings have been held between the different heads of communication on campus to turn this situation around. Despite this improvement, and as mentioned previously, we must roll out a communication model targeting the entire campus, regardless of the communication policies of each of the institutions validated by the respective heads of each.

It should be noted that the vision of both the hospital's management and the scientific management is **centred on the campus**. In short, we need to start out with a raft of minimum actions to unlock the value of all the professionals who work on campus.

- There is no process management model allowing for continuous improvement of administrative support services for researchers, nor is there a flexible and well-structured organisational model. The justification for this change can be found in focal point 7 of this Strategic Plan and concerns researcher support services, such as project management, economic management, technology transfer and communication.

The following lines of action have therefore been proposed to reverse this situation:

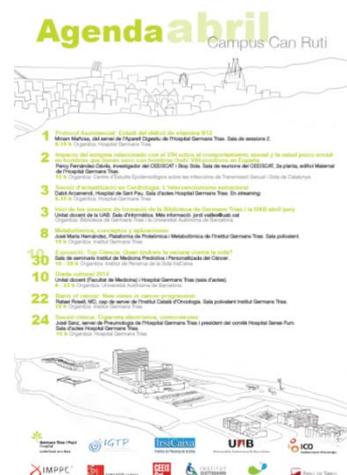
Lines of action and objectives to be met:

4.1 Defining and enhancing a campus brand that embraces all component institutions.

The objective for 2017 is to have constructed a global image of the campus where everyone feels represented; one that is fully consolidated and known by both stakeholders and the general public. To accomplish this objective, we must propose a brand in which all campus institutions are involved, secure the backing of Badalona City Council when consolidating the global image of the campus, and establish a model for communicating this universal brand, which will be shared by and involve all institutions on campus.

Furthermore, we must heighten awareness and improve the perception of the Can Ruti campus, while strengthening the ties between the component institutions and the local population of Badalona. All this with the support of Badalona City Council and articulated through a raft of different actions, including:

- Strengthening communication policies within the campus: posters and signage bearing the corporate image, signposting to the campus, instructions on how to find us, advertising on local buses, visible images across Badalona, actions aimed at scientific dissemination (patient association, students, future careers in science, etc.), and shared website featuring all the institutions, which redirects users to the specific website of the institution they are after, among others ideas.
- Promoting sponsorship and public-private partnerships that can lead to significant projects and alliances. On this point, the chosen model must include initiatives to bring the campus closer to the population of Badalona, thus improving its public image and generating a sense of belonging and, in the mid term, generating crowdfunding opportunities with the local population. The involvement of Badalona City Council and of well-known and respected local figures is of paramount importance in this regard.





4.2 Devising a communication plan coordinated with all institutions on campus.

IGTP's target communication model for 2017 must provide a great deal of visibility and exposure for the Institute and the researchers, whether or not opinion leaders. The model must also embrace all the different institutions present on campus and be aligned with the campus' image and communication model.

It is for this reason that we must come up with and roll out a communication plan with the support of all component members of the Institute. To start with, a communication officer or coordinator must be appointed and a communication committee set up and tasked with establishing and agreeing upon the objectives of the plan, planning the necessary actions and monitoring and validating progress. This committee shall include researchers and administrative staff from the Institute, the head of communication and, ideally, the heads of communication of the other institutions on campus, following a proposal from the respective management team.

This communication plan must factor in all the Institute's stakeholders and plan different actions for each (associations for patients, students, the local population, professionals, institutions, etc.). Initiatives in Badalona must be stepped up, without losing sight of the actions that need to be carried out across Barcelona as a whole and on the international stage. We must envision actions aligned with the goals of H2020 and aimed at seeking out competitive funding to execute our plans.

4.3 Developing a process management model and driving forward a functional reorganisation.

This line of action is the same as 7.1 and 7.2 of the strategic focal point 'Attaining excellence across all the Institute's processes and activities'.

Accordingly, the aim is to have identified all processes related to researcher administrative support services, each with an assigned person in charge, indicators in place and a defined improvement plan.

Likewise, the organisational model must guarantee that the functional areas relating to administrative support services are perfectly defined, tailored to the needs of the Institute's affairs and headed by suitable personnel in terms of skills, education, training and experience.

Appendix 2 to this Strategic Plan provides a full and detailed list of actions associated with these lines of action. In the meantime, the following figure shows the intended timeframe for the lines of action:



FOCAL POINT 5

Increasing the campus' degree of internationalisation

Current situation:

The Institute's internationalisation indicators have improved over the years, but still remain rather average (number of requests for international projects and active international projects, competitive international funding secured, researchers from other countries, among others). This is largely due to the fact that internationalisation has never been an overriding strategic need, meaning that:

- The Institute's visibility has not been improved outside Spain as a means of forging international alliances and collaborations. The Institute's positioning and visibility impacts its ability to attract international interest, whether talent or partners with whom to conduct joint research projects. Action must be taken in this regard, but individually by the research groups themselves rather than institution as a whole. These groups must create networks and rely more on networking among stakeholders.
- There has never been a unit for international projects. The number of requests for international projects and the number of active international projects at the Institute have been low over recent years, as there has been no unit in charge of international projects to provide support to researchers. Thus, the Institute's presence in global projects has been proportional to its capacity to create partners and its awareness of the aid and subsidies available. Now, following the recent creation of this unit, the aim is to turn this situation on its head as the Institute looks to attract international talent, boost involvement in international projects and create a healthy network of partners.

Lines of action and objectives to be met:

5.1 Increasing the exposure and visibility of researchers and research groups present within the Institute and on campus.

This line of action is envisioned in section 4.2 "Preparing a communication plan aligned with all institutions on campus" of the strategic focal point titled "Fostering an active and effective dissemination of research activities and results, along with the services and activities of the Institute".

The 2017 objective of IGTP is to render the Institute and its researchers more visible, embracing also all the different members of the campus, the ultimate aim being to increase the appeal of the Institute when it comes to attracting and retaining talent and improving its ability to attract potential partners for joint ventures.

One of the specific objectives of the communication plan to increase visibility and boost internationalisation is to commit to actions such as:

- **Improving attendance at international congresses and events** to network, present projects, stage meetings and showcase the campus' own technologies. To fund this mobility, a procedure must be set up across the Institute to ensure that the associated travel costs are always added to any project application. Furthermore, mechanisms must be designed to recognise those groups that periodically improve the Institute's visibility and exposure.
- **Boosting the presence of international experts** through research seminars and talks and making the most of the opportunity to familiarise them with the Institute first hand so that they get to know the Institute's different groups, lines of research and researchers.
- Weighing up the merits of staging an **international congress** at the campus involving all its institutions.



These actions must be developed and implemented by the communication unit in collaboration with the Institute's international projects office. H2020 envisages different tools for carrying out all these actions.

5.2 Establishing active policies to attract international talent.

This line of action is included as one of the specific actions discussed in 2.2 "Establishing active policies to attract and retain talent" of the strategic focal point titled "Fostering the recruitment and retention of talent". The use of the English language will also be encouraged as the main language for communicating at internal scientific meetings. Doing so will facilitate the recruitment of foreign researchers while also helping Catalan and Spanish researchers improve their level of English.



5.3 Strengthening involvement and leadership in international projects.

The new international projects office must roll out awareness initiatives among researchers to educate and encourage them to change their strategy when it comes to seeking funding for their research, making it a global rather than strictly local process in just Catalonia and Spain. Action must also be taken to disseminate and provide information on all available calls and tenders, and to accompany and support researchers planning to present international bids and proposals.

Appendix 2 to this Strategic Plan provides a full and detailed list of actions associated with these lines of action. In the meantime, the following figure shows the intended timeframe for the lines of action:



FOCAL POINT 6

Defining and championing a scheme of functional coordination between all campus institutions

Current situation:

The location and geographical proximity, and the institutions and the activities undertaken at Can Ruti in terms of health (health care, teaching and research) all combine to create an ideal environment from which to contextualise a health-oriented campus that offers all the advantages these aspects bring. Moreover, the fact that the Institute is ISCIII-accredited and an official CERCA centre makes it the ideal centre point through which to structure the transition. This unique positioning marks it apart from all other biomedical research institutes in the area.

All institutions on campus are clear that they need to position themselves in line with this approach and are committed to creating a shared campus brand where everyone feels represented. That said, and although certain progress has recently been made, the concept of campus has yet to take root throughout all the component institutions, largely because:

- **There is no unified brand to bring together all the institutions on campus**, as discussed in focal point 4 of this strategic plan.

Moreover, although it is clearly understood that the campus concept would allow for a more efficient sharing of resources and generate critical mass, and despite action having been taken in this regard, there remains an awful lot of work to ensure functional coordination akin to functional integration. The aim of this is to optimise all technical-scientific services and administrative support services, while also establishing and building on synergies between all areas of knowledge on campus. This state of affairs is chiefly down to the following factors:

- **There is no functional coordination plan featuring all institutions on campus.** That said, certain progress has been made on the subject of communication through periodic meetings between the different heads of the institutions. HUGTP has also set up channels for collaboration whereby resources are shared with IGTP, including IT support, financial management support, general services within the context of the Comparative Medicine and Bioimaging Centre (CMBC) project, and so on, or by increasing the use of platforms between clinics and fostering collaboration on health care projects. IGTP, IMPPC and IJC, through a SUMA project, have initiated a programme geared towards functional integration. Yet more intra-campus collaborations are needed on not only research projects but also functional coordination at a management level so as to encourage common strategies and share services.

Lines of action and objectives to be met:

6.1 Defining and enhancing a campus brand that embraces all component institutions.

This line of action is the same as 4.1 of the focal point titled “Fostering active and effective dissemination of research activities and results, along with the services and activities of the Institute”. In summary, the objective for 2017 is to have constructed a global image of the campus where everyone feels represented; one that is fully consolidated and known by all stakeholders. To accomplish this objective, we must ensure a brand perception that encompasses all campus institutions. We must also secure the backing of Badalona City Council when consolidating the global image of the campus, and establish a model whereby all institutions on campus are able to communicate this universal brand.



6.2 Preparing a functional coordination plan.

The target model for functional coordination across the campus by 2017 must allow all members of the campus to benefit from shared technical-scientific and/or administrative support services arranged and structured through IGTP, provided the institution in question is not able itself to offer the services to its staff. It must also help improve collaboration on intra-campus research projects.

It is therefore necessary to come up with and roll out a functional coordination plan with the support of all component members of the campus. To start with, a **coordination committee** will be set up and tasked with establishing the objectives of the plan, organising the necessary actions and monitoring and validating progress. This committee must include the most senior officers of all the institutions on campus.

The coordination plan must factor in all the **cross-cutting services** of interest to the different institutions and must likewise arrange different actions for each institution (platforms, valorisation, communication, human resources, European projects, and so forth). Some of these actions may be those put forward during the preparation of the strategic plan, such as:

- **Technical-scientific platforms and services:** promoting their use among all the members of the campus, making the range of services more visible, requesting or acquiring new equipment, or updating existing equipment with the agreement of the entire campus, thus preventing possible overlaps and waste of resources.
- **Library:** improving the on-site library of HUGTP and subscriptions to science journals, taking into account the many different tastes and preferences of the campus and expanding library content accordingly.
- **Intra-campus scientific collaborations:** upping the number of scientific collaborations among the various institutions on campus. This will entail staging periodic meetings and events to showcase the research lines/areas/technologies of each of the institutions. A solid model might even profit from the general weekly meetings at HUGTP by opening these up to researchers so they can discuss and disseminate their research. Annual conferences can also be organised by pathological area or transversal research area among campus institutions.
- **University:** building a post-graduate translational biomedical research programme that reflects and is in line with the knowledge generated on campus, and ensuring transversality with all HUGTP services.
- **Legal ties:** seeking out legal mechanisms such that campus institutions without legal ties can apply for European or similar projects in which only one institution per country is needed, acting jointly as third parties. Ex. Joint Research Unit.
- Arranging **specific agreements for each of the institutions** in which all the parties feel comfortable.
- **Including staff assignment agreements.**



- Establishing guidance on the signing of research communications.
- **Membership:** unifying membership criteria for all campus institutions on the subject of publishing. One of the most important assets of IGTP is the multiple institutions that make up the Institute. However, this also means that professionals on campus belong to numerous different associations. Therefore, so as to ensure that the institutions are able to see their research work reflected properly in national and international research indicators, **clear membership guidance has become essential in order to paint a clear picture of IGTP.** All scientific communications involving campus researchers, regardless of their contractual relationship, must invariably be signed by IGTP. Professionals that also belong to other institutions will state any such relationship by adding the corresponding official membership. Example: Institut Guttmann – IGTP or HUGTP – IGTP

In tandem, IGTP must continue to provide technical-scientific and administrative support structures to satisfy potential demand from around the campus, as discussed in focal point 7 of this Strategic Plan, titled "Attaining excellence across all the Institute's processes and activities", as well as integration with IMPPC and IJC.

Appendix 2 to this Strategic Plan provides a full and detailed list of the actions associated with these lines of action. In the meantime, the following figure shows the intended timeframe for the lines of action:



SCOPE 3: ORGANISATION, RESOURCES AND SERVICES

In order for IGTP to improve its strategic position and functioning, its organisational model, management and decision-making must be based on an approach to work that ensures that the actions are in line with the Institute's objectives, while guaranteeing control over efficiency when assigning and managing resources.

To make this a reality, all Institute units, including both research and management arms, must adopt a management and decision-making model centred on identifying strategic and operating objectives aligned with those of this Strategic Plan and on the use of efficiency criteria that defines and then channels the resources to be employed.

A **quality management strategy** configured thus must be based on an all-embracing vision of the research and management structures and the human resources of each, as well as the research- and management-associated processes and infrastructures, whether or not technological.

The Institute must likewise have effective high quality infrastructures, equipment and services, all configured to respond to the needs of users, whether internal or external. Moreover, infrastructures, equipment and services must be managed such that the Institute's research model and the complementarity of the campus are sustainable, while also providing any support that researchers may require.



This vision must include all the elements envisaged to remain an ISCIII-accredited health research centre, encompassing such aspects as the financial management of the Institute, staff management, research management, the technology transfer process and the financial management of specific projects and research agreements.



FOCAL POINT 7

Attaining excellence, efficiency and sustainability across all the Institute's processes and activities

Current situation:

The organisational model, management and decision-making must be improved upon to ensure that the actions of the Institute's component units are reliably aligned with institutional objectives, guaranteeing a form of **management geared towards efficiency** in assigning and managing resources. This state of affairs is chiefly due to the following factors:

- There is no process management model that allows for continuous improvement across all Institute processes. Nevertheless, work in this direction got under way in 2013 as part of the process of earning ISCIII accreditation as a health research institute: there is, therefore, an official map of processes, management manual, quality plan and different working procedures. Most of these are not in operation, and those that are have not been reviewed, updated or publicised since.
- The current management structure is limited at human resource level to implementing a process management model; something that might suggest that the target model should be flexible and consistent with the current structure.
- Previously approved strategic plans have not been effectively implemented or monitored, as they haven't been applied universally across the entire Institute. Compliance with the strategic objectives has been assessed periodically using general research indicators, but aspects related to the Institute's other areas and units have not been reviewed.
- There is no flexible and well-structured organisational model. Growth in business has taken off at a faster rate than growth in management and administrative personnel, meaning responsibilities and duties are not always assigned to those with the most suitable professional profile. It has also entailed excessive workloads that have simply not allowed for a flexible and well-structured organisational model focused on continuous improvement. There are no key figures in an organisational model intended for a research centre, such as a manager, a head of human resources, or even a communications officer.

Furthermore, the integration of IMPPC within the structure of IGTP necessitates an integration plan and a review of all management- and research-related processes in order to avoid overlapping while maximising synergies.

The following lines of action have therefore been proposed to reverse this situation:



Lines of action and objectives to be met:

7.1 Developing a process management model

The target management model for 2017 must have all Institute processes properly identified, implemented and under continuous review. It must also be scaled and sized in accordance with the Institute's organisational structure.

Accordingly, the aim is to have all processes identified, each with an assigned person in charge, indicators in place and a clearly defined improvement plan. There must also be a senior management figure (manager also responsible for quality) and a quality committee with a select few members and with decision-making powers to guarantee the continuous improvement of the Institute's activities.

Processes must be deployed progressively and following a priority queue, depending on their importance in relation to the management of the Institute and its accreditation as a health research institute (staff and financial management of the Institute and the financial management of projects and research agreements, as well as transfer of technology).

Similarly, indicators must be aligned with the requirements for accreditation as a health research centre and with those of this Strategic Plan.

It will be necessary to define the methodological aspects with which to tackle this process management: process files, analytical methods and definition of indicators, procedure for holding meetings, etc. A simple methodology will be chosen; one that adapts to the management structure of IGTP, in accordance with the gender equality plan and the European human resources model.

The heads of the processes will be trained accordingly so as to ensure they can discharge their duties. The current process map will be reviewed and simplified, taking into account the integration of IMPPC on account of the SUMA project.

7.2 Driving a functional restructuring

The target organisational model for 2017 must guarantee that the functional areas are perfectly defined, tailored to the needs of the Institute's business and headed by suitable personnel in terms of skills, education, training and experience.

The short-term integration with IMPPC will mean this activity can be carried out more effectively, as the parties benefit from existing synergies in terms of functional structuring and competent personnel.

Moreover, the short-term integration with IMPPC should also be harnessed to maximise existing synergies in terms of functional structuring and staff integration.

Appendix 2 to this Strategic Plan provides a full and detailed list of actions associated with these lines of action. In the meantime, the following figure shows the intended timeframe for the lines of action:



FOCAL POINT 8

Ensuring ongoing sustainability and improving fund-raising

Current situation:

Funds secured by IGTP for different concepts expressed as an average percentage from 2003-2012 are as follows:

- 34 % of funds came from collaborative ventures with industrial partners, including clinical trials.
- 50 % of funds came in the form of grants from competitive funding, roughly 12 % of which related to international funds.
- 4 % of funds came from donations.
- 8 % of funds came from grants reported to income.
- 7 % of funds came from financial returns.
- 5 % of funds corresponded to other contributions, including direct funding from the Generalitat (autonomous government of Catalonia).

Thus, conceptually speaking, the funds to which IGTP has access can be broken down into:

- Structural funds. Funds that the Institute must have due to its status as a public entity and which only accounted for 5 % of total funds secured for the period.
- Competitive funding. All funding that comes from any kind of competitive bidding process.
- Other funds. Chiefly funds from sponsorship and transfer of knowledge and services to industry or other institutions.

The following table provides a breakdown of expenses for the same period:

Expense type	Percentage of total
Consumables	21 %
Wages and salaries	32%
Social Security contributions	10%
Provisioning for amortisation/depreciation	9%
Repairs and maintenance	2%
External services	13%
Supplies/utilities	4%
Other expenses	8%



The following trends have emerged in terms of access to public funding, taking into account the economic stranglehold on the research sector over the last four years:

- Research policies are looking to increase private investment or contributions to research.
- Research policies are looking to increase international funding for research, particularly from European programmes.
- With regards to Spain as a whole, current public spending on research has fallen to 2004/2005 levels, but with approximately 50,000 more public researchers.
- Licensing income remains highly concentrated in the top 10 % of European research centres and universities, which account for roughly 85 % of such income.
- 88.8% of licensing income across Europe (346 million euros in 2012) comes from biomedical inventions.
- On average, licensing income represents 1.5 % of total expense on R&D in the EU, while this figure rises to 4 % in the case of the United States.

So although IGTP has managed to increase its funding, which reached a combined average of 10 % growth from 2003-2012, there are different types of income (structural funds, especially those relating to sponsorship, international competitive funding, transfers of knowledge and services to industry) that have not been incorporated systematically or sought out with sufficient expert internal support. This state of affairs is chiefly due to the following factors:

- There was no management structure backing these concepts. Nevertheless, work is now under way to turn the situation around, mainly through the creation of structures for managing international projects, transferring knowledge, and improving coordination and marketing through the Multi-Purpose Clinical Research Unit (MCRU).
- There is currently no process management model allowing for continuous improvement of researcher administrative support services, nor a sufficient organisational model for meeting the actual and potential demand of our researchers (IGTP), or, for the most part, of the other researchers on campus. The justification for this can be found in focal point 7 of this Strategic Plan, which concerns researcher support services, such as project management, economic management, technology transfer and communication.
- No active policy has been rolled out to increase structural funds from the government. Despite the brave move to define a polynomial formula of funding for research centres based on productivity and efficiency, this has never been actually implemented, not even following a progressive model. If this had been the case, IGTP would now be well on the way to obtaining a more solid support structure for our researchers. Instead, this goal has had to centre on competitive funding with the associated overheads, including the overheads of clinical trials. So, although the financial results have been positive over recent years and indeed over the entire history of IGTP, this hardly seems acceptable in conceptual terms, and at best places the Institute in a state of uncertainty it does not deserve, particularly when we take into account the impressive efficiency and productivity achieved. Despite the fact that the increase in structural funds is not something that IGTP can control directly, it has been missing a systematic policy of lobbying to ensure that the funds it receives due to its status as a public institution are in keeping with the Institute's critical mass and its scientific production. In this regard, a simple benchmarking test shows our Institute to be among the best in any ranking for Spain as a whole or for Catalonia.



Lines of action and objectives to be met:

8.1. Implementing a strategy to secure funding from sponsorship.

With regards to the fund-raising objectives for 2017, there must be a specialist unit in place to seek out, manage and execute contributions from sponsorship and patronage, thus enabling the Institute to increase funding from this source.

At present, IGTP funding from sponsorship and patronage has been a token amount compared to the potential out there. In this connection, a paradigmatic example on our campus is the magnificent work carried out by Irsicaixa and Fundació Lluita contra la SIDA, which is surely a model to follow. This matter must therefore be tackled in order to maximise the related activities, focusing our efforts on three main targets:

- Civil society of Badalona.
- Civil society of the metropolitan area of Barcelona.
- Rest of the world.

These actions will require the Institute to engage in effective dissemination and communication, which is needed to create the structures in turn needed to improve fund-raising from private sources, such as crowdfunding strategies. In this regard, a number of initiatives carried out by individual researchers have proved highly effective. Accordingly, the Institute is obliged to step in and not leave this matter solely in the hands of our most committed researchers. These aspects are also very strongly linked to the activities that must be performed as part of the actions set forth in 4.1 "Defining and enhancing a campus brand that embraces all component institutions". Clearly, a shared brand -that of the Can Ruti campus- created to include the prestige and standing of all members and the proven scientific wealth of the site also reciprocally strengthens sponsorship and patronage actions. In other words, the more prestigious the brand, the greater the patronage it attracts, and the more patronage obtained, the more powerful and prestigious the Can Ruti brand becomes.



8.2. Improving access to international funds

This line of action is included and fully explained as one of the specific actions within 5.3 "Strengthening involvement in international projects" of strategic focal point 5: "Increasing the campus' degree of internationalisation".



8.3. Establishing a collaboration plan with industrial partners.

Currently, the main means of collaborating with industry is through clinical trials. Although this concept has in the past accounted for a high percentage of the funds secured by IGTP (in the region of 30%), all procedures and mechanisms related to collaborations with industrial partners must be systematised. We must therefore draw up a specific plan to strengthen and systematise these kinds of collaboration, placing special emphasis on the staging of clinical trials.

Procedures and mechanisms must be put forward to allow for global management and boost collaborations with industrial partners, which should include the entire pipeline of products in progress (drugs, treatments, diagnostics, etc.) and factor in all the structures of the Can Ruti campus that can provide support across all stages of development of such products. It should be noted that the Multi-Purpose Clinical Research Unit (MCRU), physically located in the HUGTP building, is superbly equipped and prepared to cover all stages of drug research, particularly stage 1. In this regard, IGTP has been and remains very active in the creation of the Barcelona Clinical Trials Platform, which aims to boost ties with the pharmaceutical industry through a shared organisational platform uniting the main hospitals of the metropolitan area of Barcelona.

8.4. Encouraging involvement in support networks for independent research.

In addition, involvement will be stepped up in support networks for the pharmacological research activities of the ISCIII (SCReN platform - Spanish Clinical Research Network); our incorporation into the European ECRIN action. All this must serve to improve collaborations with industry and result in more clinical trials, which, as we have indicated on numerous occasions already, constitute an important part of our income and underpin the economic sustainability of IGTP.

8.5. Guaranteed efficiency and sustainability

- Preparing preliminary feasibility studies for any action that entails heavy investment.
- Detailing and studying the degree of co-financing of technical-scientific services.

Appendix 2 to this Strategic Plan provides a full and detailed list of actions associated with these lines of action. In the meantime, the following figure shows the intended timeframe for the lines of action:



FOCAL POINT 9

Defining a strategy for the Institute's technical-scientific services that not only consolidates and strengthens them but also renders them more sustainable.

Current situation:

Although the Institute has quality infrastructures, equipment and research support services, whether administrative or technical-scientific, these must be managed better because the researchers demand it, and also rendered sustainable and brought fully in line with the needs of the researchers, the Institute's research model, the complementarity of the campus and its competitors. This state of affairs is chiefly due to the following factors:

- There is no global plan for technical-scientific platforms and services. That said, work has started in this direction, chiefly in determining costs, establishing a rates system, and defining the associated portfolio of services for the Institute's 10 platforms (genome, cytometry, bioimaging, proteomics, biobank, cryobiology, microscopy, histopathology, animal house and MCRU). Even so, internal or external action must be taken to identify the current and future needs for platforms and services, identify their sources of funding, and encourage and promote their use.
- There is no process management model as such, allowing for continuous improvement of administrative support services for researchers, nor is there a flexible and well-structured organisational model. The justification for this change can be found in focal point 7 of this Strategic Plan and concerns researcher support services, such as project management, economic management, technology transfer and communication.

Likewise, aside from the platforms mentioned above, and as commented previously, the Institute has a clinical research unit (MCRU), an animal house and, in the near future, a Comparative Medicine and Bioimaging Centre (CMBC) to replace the MCRU, which will be equipped, among other things, with imaging equipment for conducting research on large animals. A new histopathology and electron microscopy platform is currently being set up. In fact, the facility has already seen active service, albeit without formal recognition and without any standard procedures and specified circuits.

Moreover, the integration of IMPPC within the structure of IGTP will result in a hugely important DNA bank and associated resources for its mass sequencing and bioinformatics platform. The cost of both platforms is currently being determined, as was done for those of IGTP.

The following lines of action have therefore been proposed with a view to improving this situation:



Lines of action and objectives to be met:

9.1 Drawing up a plan for technical-scientific platforms and services.

The technical-scientific platforms and services model for 2017 must allow for these to become more consolidated, sturdy and sustainable. A platforms and services plan must therefore be drawn up and rolled out with the support of different members of the Institute, above all the technical heads of such platforms and services. To start with, a platforms committee will be set up and tasked with establishing the objectives of the plan, organising the necessary actions and monitoring and validating progress. This committee must include prominent researchers from the Institute and heads of the platforms, who will be proposed by the management. In actual fact, there is currently a platform coordinator charged with managing organisational problems from an operational standpoint. The aim of the platforms plan is certainly to make this activity more formal and structured, but also now to ensure that the resulting proposals have a strategic facet. Furthermore the committee will look into all international actions that the platforms on campus could become involved in, particularly the EATRIS initiative, at the very least in the case of biomarkers and bioimaging. The pertinent steps will also be taken to weigh up the merits of collaboration agreements with the platforms of other institutions and establishing actions that could generate economies of scale. Lastly, the committee will have an important role in relation to the dynamic of renewing equipment and studying the best approach to this by looking into the pros and cons of purchase or leasing agreements.

In order to establish the objectives and plan the actions, an internal and external analysis will have to be conducted beforehand of the technical-scientific platforms and services.

Part of the internal analysis has already been carried out, with an objective assessment and characterisation of costs, resources and funding structure for the platforms. However, a portfolio of services must be prepared, rates fixed and uncovered needs analysed, including a study of the reasons for why Institute researchers outsource some of the technical-scientific services to platforms belonging to other institutions.

The external analysis of services and platforms must be conducted through a benchmarking process, factoring in the platforms and services of the campus, of the region, and of other countries. This analysis must include a study of future technological needs to be able to decide whether the Institute should opt for new platforms before 2017. As part of the work to prepare this Strategic Plan, the following technological needs were listed. They must now be explored further in the above study to decide upon the merits of embarking on the following new platforms:

- *3D bioprinting*
- Virtual simulation
- Robotics applied to surgery
- Regenerative medicine and tissue engineering
- Biostatistics/bioinformatics
- *Big data*
- *Telehealth / mobile health*



The objectives of the platforms plan and the planning of the corresponding action must take the following aspects on board:

- **Reviewing the rates system and funding structure:** decisions on the final rates for services, along with ideal funding model to render the platforms sustainable, including type of billing (internal, external and private clients), own funds applied directly, competitive funding, and commercial strategies and approaches for acquiring/renewing equipment.
- **Forging alliances:** decisions on which strategic alliances are needed, whether with competing agents, research centres, industry, or government bodies. Support action from the Institute to help strike up these alliances.
- **Restructuring of platforms and services:** decisions on the elimination or bolstering of existing services and platforms. Regardless of these decisions, the platforms must provide across-the-board advisory services to the researcher after the corresponding request is received in the event the platforms then outsource the service in question. In the case of services related to clinical diagnosis, the possible need to unify criteria with entities from the hospital area must be addressed in the short to mid-term. The possible need to certify technical-scientific services according to international quality standards must have been analysed before being eventually applied to the clinical diagnosis.
- **Roll-out of new platforms and services:** decisions on the roll-out of new platforms and services. This aspect must include a new protocol governing the creation of new services and platforms. A prime example of this at present is the planned start-up of one of the most significant and far-reaching pieces of equipment, namely the Comparative Medicine and Bioimaging Centre (CMBC). The CMBC must help increase the quality and quantity of research of campus researchers, while also providing service to other researchers from the metropolitan area of Barcelona and also to the industry associated with the health sector.
- **Promoting the use of platforms and services:** decisions on how the technical-scientific platforms and services are to be disseminated. This aspect is transversal with the actions of focal point 4 of this Strategic Plan. Mechanisms must be established to ensure that Institute researchers only outsource technical-scientific services when the Institute cannot meet their needs itself.
- **Having the necessary resources and infrastructure.**
- **Preparing a well-defined portfolio of services for all institutions on campus and establishing incentives to promote their use.**



9.2 Developing a process management model and driving forward a continuous review of the way the services are organised functionally.

This line of action is the same as 7.1 and 7.2 of the strategic focal point 'Attaining excellence across all the Institute's processes and activities'.

Accordingly, the aim is to have identified all processes related to researcher administrative support services, each with an assigned person in charge, indicators in place and a defined improvement plan.



Likewise, the organisational model must guarantee that the functional areas relating to administrative support services are perfectly defined, tailored to the needs of the Institute's affairs and headed by suitable personnel in terms of skills, education, training and experience.

Appendix 2 to this Strategic Plan provides a full and detailed list of actions associated with these lines of action. In the meantime, the following figure shows the intended timeframe for the lines of action:



APPENDICES

APPENDIX 1:

External analysis



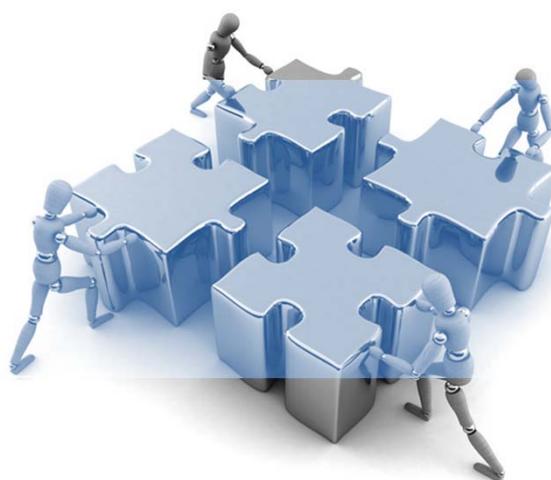
APPENDIX 2:

Planning



APPENDIX 3:

Parties involved in preparing the
Strategic Plan





As the Scientific Director of IGTP, I would like to thank all those individuals and institutions without whose contribution we would not have been able to prepare the new 2014-2017 Strategic Plan for IGTP.

I am confident that this project will spur you forward and I look forward to your ongoing assistance in bringing it to fruition.

Many thanks for your support.

Yours sincerely,

Manel Puig-Domingo MD, PhD

Scientific Director



STRATEGIC PLAN 2014 - 2017

