

Harvesting talent: strengthening research careers in Europe

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It is talent more than technology that society or business needs from universities.

Research and the people trained in it inspire many of the ideas, aspirations and actions that contribute to the vitality of society and its capacity for bold creativity in responding to whatever the future might bring.

The prime function of leading-edge research is to develop new understanding and the creative people who will carry it into society.

Most European researchers are trained in universities, and have their attitudes and perceptions formed in them. Universities' productivity in fundamental research, the seed corn for the whole research base, has been prodigious, assisted by their access to the best talents of the rising generation and the creative influence of the irreverent young.

It is crucial that some of the best intellects in each generation continue to be attracted to research careers, and are given every opportunity to grow in confidence, capacity, ambition and creativity.

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Summary

- A powerful and internationally competitive research base, essential to the present and future vitality of Europe, depends fundamentally on a strong cohort of highly creative researchers, and therefore on Europe's capacity to attract some of the best minds in each generation, not only from Europe, but also from the global pool of talent.
- The institutions in which research is done must respond to four vital contemporary imperatives:
 - the need for "critical diversity" as well as critical mass, recognising that many of the most powerful ideas arise from unexpected areas of study;
 - that many major challenges facing the contemporary world require systemic thinking that draws on a great variety of disciplines, and that researchers must be adept in working in such a setting;
 - that research in many domains is a global enterprise and must be able to engage globally;
 - that national interests not only require collaboration but competitiveness by international standards.
- The uniqueness amongst human institutions of comprehensive research-intensive universities, because of the breadth of knowledge they encompass, makes them ideal locations for the development of the researchers that society needs. They play the crucial role of educating and training Europe's researchers in their early careers, and therefore carry a heavy responsibility to offer attractive and stimulating careers and a productive setting for research. They must play a central role in developing the European Research Area if this is to become a powerful agent in developing Europe's research capacity.
- Although research careers can rarely compete with the salaries of the private sector it is important that they are seen to offer unique opportunities for well-supported, creative freedom and personal satisfaction. The key objectives of policy for research careers must be: to attract highly talented graduates from the international pool of talent; to support realisation of a researcher's potential for creativity; and to maximize benefit to knowledge, learning and society. To do this, we must maximize the potential for high achievement and provide an attractive career framework.
- Realising the potential for high achievement depends upon:
 - a **research environment** with a wide variety of researchers working on cognate topics, strong links with other disciplines in a cross-disciplinary setting, good international connections, cross-fertilisation of ideas from external researchers, and access to appropriate facilities.
 - **independence and responsibility** at an early stage of a research career.
- An attractive and efficient research career structure requires:
 - **well-designed posts** that are adapted both to research needs and career prospects of researchers;
 - **well-structured career perspectives** that clearly indicate avenues for progression including posts outside academia;
 - **strong funding** and facilitating processes that permit competitive salaries to be offered;
 - **career development** support;
 - **advice and support for diverse career pathways**;
 - **shared responsibility** for research careers between all key stakeholders, comprising universities, governments and those from public and private sector who fund research.
- We identify five principal functional types of research post that we believe exist amongst those researchers not holding a full-time academic position:
 - Personal research fellowships, which we strongly advocate should be extended to five years or more;
 - Research associates employed through research grants;
 - Enterprise fellowships that offer holders support in developing commercial applications from their research;
 - Research assistants employed through highly specific research contracts;
 - Research assistants/high-level technical officers.

The principles described in the previous paragraph should be applied in different ways to all these functional types.

- *There are considerable differences between research careers in different European countries. A four-stage model of research careers which permits comparison between different European systems is presented, together with career maps that illustrate the patterns of progression between these stages across Europe. They are designed for researchers in planning their futures. The patterns reflect historical and cultural differences and must be understood before any attempts are made to unify elements of career structure across Europe.*

CONTEXT

The importance of research careers

1. Research and the people trained in it are increasingly vital assets in any modern society. They underpin the shift from economies based on land, labour and capital to ones based on information and knowledge. They are crucial in guiding a society's response to great contemporary challenges such as climate change, food security and energy. They make essential contributions to the development of social and public policy. They inspire many of the ideas, aspirations and actions that contribute to the vitality of society and its capacity for bold creativity in responding to whatever the future might bring.
2. These attributes crucially depend on people in whom the capacity for creative thought and action has been stimulated in an environment that encourages free ranging enquiry, and who develop habits of rigour, sceptical and persistent curiosity and sometimes the capacity for towering intellectual achievement. They tend to be stifled by top-down management of a ponderous and bureaucratic enterprise driven by pre-determined strategic priorities.
3. The institutions that attract and nurture young researchers, and in Europe they are predominantly its research-intensive universities, must maintain and

stimulate the development of these qualities, and recognise that their seeds are sown by attracting some of the best intellects into research and ensuring that they are given every opportunity to grow in confidence, capacity, ambition and creativity.

Current imperatives

4. Policies designed to support and stimulate research and young researchers need to recognise four contemporary imperatives:
 - a. The emergence of new understanding that may be powerful in creating markets, social opportunities, identifying risk or facing major global challenges is highly unpredictable, and foresight exercises or assessments of technological potential have had a poor record of anticipating future developments only a few years away. It is crucial that national and European research bases maintain a full diversity of excellence to prepare for an unknown future. "Critical diversity" is as important as critical mass.
 - b. Major contemporary challenges require us to draw on a wide range of disciplines. Many new and powerful applications are based on great varieties of input. For example, a study of ten key advances in cardiovascular medicine were traced back to about 600 papers from different disciplines which provided the basis for the advances. Over 40% of them had nothing to do with cardiovascular medicine and many of them were not carried out in medical departments but in departments of chemistry, engineering, physics, botany, agriculture, zoology, etc¹.
 - c. Research in the modern sense has always been stimulated and communicated through international networks. But now the research base itself is becoming globalised, with research teams working across international boundaries. Europe's institutions must respond to this trend.
 - d. However, the international domain of research is not only one of increasing collaboration, but also one of strong competition. The realisation of the powerful role that research plays in catalysing the economic and social dynamism of modern society has stimulated major investments in national research bases. For example, China's systematic investment in research, which has concentrated on a handful of its top universities, has produced an explosive rise in research output that has increased

¹ Paten, W. *Man and Mouse*. Oxford. 1984.

fourfold in the last decade, with the imminent prospect that China will emerge as a research giant to surpass Europe and rival the USA. The consequences of such trends are to enhance the global competition to attract the best research talent; and, in the economic sphere to shift, in the case of China, its economy towards greater competitiveness in providing research-based high value goods and services, thereby adding to its existing dominance in lower value manufacturing.

5. These imperatives for a powerful, broad, internationally networked research base are ones that Europe cannot afford to sidestep. Although they coincide with an era in which public investment is likely to diminish rather than increase, the research base, which provides vital seed corn for the future, must not be allowed to decay in comparison with the international competition. Governments in Europe should, as far as possible, seek to increase their investment in research, but at a minimum, to maintain it at present levels. It is tempting to respond to crises only by actions that address immediate issues. But it is important that we do not “waste a good crisis”, and that we use the occasion to make plans and investments for the longer term. We have argued previously that a rejuvenated European Research Area (ERA), if properly conceived, could be a powerful means of maximising the benefit of research expenditure in Europe, and not merely through the relatively small sums allocated through the Framework Programmes².
6. These issues however provide the context for the present paper, not its main thrust, which is to assert that the creativity of its researchers is the bedrock on which an effective research base is founded; that opportunities to develop and deploy such creativity are the means whereby the best talents are attracted; that research careers must offer and be seen to offer such opportunities; and that attractive careers are essential pre-requisites if Europe is to attract and develop the researchers it needs to rise to the challenges set out in paragraph 4.

The roles of research-intensive universities

7. Major research-intensive, comprehensive universities are exceptionally placed to respond to these impera-

tives and to provide the framework for early research careers. They individually embrace a uniquely broad tapestry of knowledge; they are grounded in a principle of academic freedom that gives their members licence to explore the most abstruse areas of knowledge; and they have a deeply rooted tradition of free interchange of ideas and people without regard for political boundaries. Almost all European researchers have their attitudes and perceptions formed at university. Most European researchers are trained in universities, and most fundamental research, the seed corn for the whole research base, is undertaken in them. Universities' research productivity has been prodigious, assisted by their access to the best talents of the rising generation and the creative influence of the irreverent young. The peace and quiet of a research institute, in contrast, may be a mixed blessing. It is this environment that has unrivalled potential to support the development and flourishing of the talents that society needs in its researchers, but also the talents that it needs in other citizens who will not become researchers, but take up a diversity of highly responsible roles in society and contribute to its creativity and its social and economic vitality. There is also powerful chemistry in the interaction between education and research in exploring at and beyond the boundaries of what is known and understood, that is immensely beneficial on both sides. It is the purpose of this paper to suggest how universities can best exploit these strengths in supporting research careers.

8. People at the start of their research careers frequently assume that an ultimate destination other than that of a permanent university post represents failure. And yet the dominant vector through which research-derived understanding is translated into utility in society is not research results but people. The prime function of leading-edge research is to develop creative people, not merely to deliver pre-specified results. It is talent more than technology that society or business need from universities. To encourage the most creative to think of a university career as the only route to success is to starve society of the talent it needs. It is therefore crucial that young researchers are encouraged to think of pathways into society and business as attractive and rewarding.
9. The European Research Area (ERA) promises to be a

² *The future of the European Research Area*. League of European Research Universities. April 2007.

vehicle for mobilising Europe's research potential in addressing the major global challenges that humanity now faces. To do so will require implementation of farsighted and creative mechanisms, the clearest examples of which at a European level have been some of the acts of the new European Research Council (ERC). LERU strongly supports the ERC, as it does the vision published recently by the European Research Area Board (ERAB)³. We regard strong emphasis on creative research careers as a fundamental building block in realising this vision - possibly its keystone - and one that requires careful construction if it is to be strong enough for the task.

10. A fundamental rationale for an effective ERA is to address contemporary grand challenges with perspectives that extend far beyond any one discipline, and to ensure that our researchers are educated and trained in such a context. The prior educational experience of a young researcher is a crucial part of their formation. Immersing a post-doctoral specialist at the age of 25 in a multi-disciplinary context is valuable, but it ignores the roots of deep understanding that are developed during their earlier higher education. In this, and in other contexts, it is therefore vital, as we have previously argued⁴, that the ERA should be conceptually linked to the European Higher Education Area, which must not be merely synonymous with the Bologna process. Indeed, a European Research Area is itself too narrow a concept. It should be thought of as a European Knowledge Area of which the ERA is an important part.

11. The great comprehensive universities have an absolutely fundamental role to play here, and not merely as "other actors", as described in a recent, top-down view published by the European Science Foundation and Heads of European Research Councils⁵. The unique property of comprehensive universities, namely that they encompass the whole range of human knowledge, endows them with a vital role that they must increasingly exploit, of developing deep understanding in a broad setting. Many of the

current global challenges are not merely about how we change our behaviour towards nature, but how we think about it: about identity, about relationships and about the sort of society we want to live in. In this setting, the roles of the humanities and social sciences are as important as those of the natural sciences. As recently argued in a LERU paper⁶, they are the essential elements of a discourse that can be explored *par excellence* in a university, and it is that discourse which is also central to the societal context for the practice of science and technology. Societal outreach by the science community is important, but how much more effective to put greater effort into these issues in the university, through which increasingly large proportions of the rising generation pass. Concepts of a networked European Research Area in which the universities are merely research hotels offer a dismal managerial perspective that ignores reality.

12. With these considerations in mind we go on to suggest the priorities that should underpin the approach to research careers in the European Research Area. As the dominant role in the early development of research careers is played by the universities, we deal explicitly with university priorities and processes. We exemplify, in text boxes, some of these as they are developing in LERU universities, and set out, in an appendix, a Model Code of Practice for Research Employment. We also present a four-stage research career framework which starts with the training of researchers through PhD programmes. However, the focus of this paper is on their subsequent development as independent researchers. PhD training is dealt with in a separate LERU report⁷.

PRIORITIES FOR RESEARCH CAREERS

13. There are three central objectives for policy on research careers: to attract highly talented graduates

³ *Preparing Europe for a new renaissance*. European Research Area Board. October 2009.

⁴ *The European Higher Education and Research Areas and the role of research-intensive universities*. League of European Research Universities. August 2002.

⁵ *EUROHORCS and ESF vision on a globally competitive ERA and their road map for actions*. European Science Foundation. July 2009.

⁶ Boulton, G. and Lucas, C. *What are universities for?* League of European Research Universities. September 2008.

⁷ *The modern doctorate*. League of European Research Universities. Forthcoming.

from the international, not merely European, pool of talent; to support realisation of a researcher's potential for creativity; and to maximize benefit to knowledge, learning and society.

14. If these objectives are to be effectively realised, the following attributes need to be satisfied:

Maximising the potential for high achievement:

- An appropriate environment for research
- The independence of the researcher

The framework for a research career

- Well-designed employment
- Well-structured career opportunities
- Well-financed positions
- Effective career development
- Planning for diverse career pathways
- Shared responsibilities for research careers

15. A research career may not offer salaries that compete with many in the private sector, but in such a competitive setting, it is important that it is seen to offer unique opportunities for well-supported, creative freedom and personal satisfaction that will be attractive to a proportion of the best minds in each generation. We argue that it is only by satisfying, and being seen to satisfy, the attributes in paragraph 14 that this objective will be realised.

and talks;

- there are easy links to a wide variety of other disciplines to facilitate cross-disciplinary connections, information flow and the possibility of interdisciplinary work on important systemic themes;
- there are good international connections that make early-stage researchers aware of the reality and creativity of international collaborations and the opportunities they offer;
- there is easy access to the facilities needed for research, including international collaborative facilities;
- and it is ideally one where researchers' ambitions are not unduly restricted by narrow horizons.

17. These are not attributes of the environment that arise easily or by chance. It is for a university to ensure that it accepts them as its responsibility in developing the next generation of creative researchers, and for senior academics to ensure that they are embedded in practice. It is the major research-intensive universities that are, and must be, the principal centres for developing the next generation of researchers, in that the scale of their research efforts permits them, best of all, to satisfy the conditions listed above. The attributes in paragraph 16 should be used as a check-list for those charged with overseeing a university's or a department's research efforts.

18. Not only is the list in paragraph 16 important for a university, it should also be used by the funders of research in scrutinising the appropriate locations for fellowships or projects that involve employment of young researchers. Equally, candidates seeking doctoral and post-doctoral positions should use them in vetting the universities and departments where they are considering working. The existence of a single expert in a candidate's chosen field of study is often, by itself, a weak basis for choice.

MAXIMISING THE POTENTIAL FOR HIGH ACHIEVEMENT

The research environment

16. Development of qualities that we believe should be most highly valued in researchers: creativity, rigour, curiosity and ambition for discovery, are strongly influenced by the environment within which they work. Ideally it should be one where:

- there are other early-stage and more mature researchers working on cognate topics, to ensure mutual critical scrutiny, debate and transmission of ideas;
- there is a strong cross-fertilisation of ideas from external researchers through seminars, workshops

Independence and responsibility

19. We are strongly of the view that the development of a powerful and creative cohort of researchers is facilitated when researchers have significant independence at an early stage in their careers⁸. Whilst we recognise that many early-stage researchers are employed on research contracts managed by a senior

⁸ See also: *Pathways to the future: the early careers of researchers in the UK*. Council for Science and Technology. October 2007.

academic, and that they do have a specified role to play in them, it is important, if they are employed as researchers, that they do not have the sense of merely being “lab rats” to fulfil an excessively prescribed and inflexible role.

20. At the outset in a post-doctoral research post, a supervisor and researcher should agree on training and career development requirements. The researcher should have an area of research which they can regard as theirs, not merely providing fodder for the supervisor. There should be a progressive increase in responsibility, for example by permitting the early-stage researcher to apply for relatively small research grants which they manage, and the opportunity to help supervise doctoral and masters students. They should have channels through which they can express their concerns, both locally to institutions and nationally to funding bodies.

21. We recommend that funding bodies should put greater emphasis on fellowships, particularly fellowships that have a term beyond three years. We are particularly impressed by the achievement of the European Research Council in creating independent posts for young researchers that give freedom to work in institutions of their own choice and that are creating awareness of a larger and more ambitious world of research. If it can be sustained and developed, it augurs well for the future of the European Research Area and its dynamism. It is for these reasons that we reject the view that “young talent should be fostered nationally – that the ERC should scale back its successful starting grants” so that “established researchers could move on to pan-European funding”⁹. We are also concerned about moves by some national funders to larger grants, which diminish the prospect of younger researchers gaining the independent funding that we believe to be so important to their personal development.

Research Council, has been to enhance collaboration and mobility across Europe. For individual researchers it has opened wider opportunities to work in laboratories and groups working at the state of the art. It has permitted research teams to be constructed that are able to draw on a wider pool of talent. It has enhanced cross-cultural engagement. However, there remain considerable barriers to mobility, and for the researcher, rather than experience gained in another country being a natural pathway to advancement in their own, it is too often a disadvantage to take “time out” from the natural pathway of career advancement at home. Research career structures have developed very differently in individual European countries in response to national needs, traditions and constitutional and legal relationships. However, although a common European research career structure might well benefit mobility, it is important to understand more fully what national structures are and which attributes inhibit mobility. It is our objective to provide transparency to individual researchers so that they may make informed choices for their career structures and also to make it clear where career structures are failing to support opportunities for creativity.

23. In order to explore this, we have examined the patterns of research career structure in LERU universities as a means of sampling European diversity, although this still omits several EU member states. Arrangements and norms vary not only between countries, but also between and within institutions. It is evident that arbitrary or hasty adoption of a single model would not only be a bureaucratic nightmare, but would be insensitive and potentially damaging to other important links in the academic chain, particularly to the crucial link between research and education at all levels.

24. A major problem is that of definition, which makes it difficult to interpret data collected across national boundaries or between institutions. We have therefore developed and used a four-stage career framework (Box 1) into which all research positions in LERU universities can be attributed, and as a translation device to facilitate cross-national comparison. It does not attempt to represent an “ideal” or “desirable” career progression, but merely to provide a broad framework of terms within which local arrangements can be interpreted, and an “internationally readable” description of diverse institutional structures.

THE CURRENT STRUCTURE OF RESEARCH CAREERS ACROSS EUROPE

22. One of the successes of the EU Framework Programmes, and most recently of the European

⁹ Dieter Imboden, President of EUROHORCs, in *Research Europe*, 2009, 284, p.7.

Box 1 - Four-stage career framework

Typical Academic Career Opportunities

Phase 1	Doctoral Candidate	Early Stage Academic	Activities	Contract Type
	Doctoral studies Teaching assistant Research assistant		Supported research and training Teaching assistance Research assistance	Fixed Term (~3-4 years) Fixed Term (~2-4 years) Fixed Term (~2-4 years)
Phase 2	Post-doctoral Scientist		Primarily research (may include training) Primarily teaching (may include training) Research and teaching	Fixed Term (~1-3 years) Permanent OR Fixed Term (~3-4 years) Permanent OR Fixed Term (~3-4 years)
Phase 3	University Scientist	Senior Academic	Research and administration Teaching and programme management Research, teaching and programme management	Permanent OR Fixed Term (~3-5 years) Permanent OR Fixed Term (~3-5 years) Permanent OR Fixed Term (~3-5 years)
Phase 4	Professor		High-level research, teaching and leadership Primarily high-level research Primarily specialist teaching	Permanent OR some Fixed Term (5 years) Permanent OR some Fixed Term (5 years) Temporary (~1 year)

Doctoral Candidate Stage: Well-defined although there is a plethora of funding and appointment arrangements even within single institutions. The PhD candidate is a supervised researcher, frequently participating in a structured programme or working collaboratively in a larger team. They may have student status, and/or be employed by the university, and have limited teaching or research responsibilities beyond their doctoral work.

Post-doctoral Scientist Stage: There are broadly two types of employment. Firstly, the typical “post-doc”, of one to three years, where a researcher is usually employed in a project led by a more senior researcher, generally on a non-renewable short-term contract. Secondly, there are the entry-level academic positions, which may be teaching or research-focused. These are usually highly competitive, and may also be time limited (two to six years), although in some systems they lead (often automatically) to a permanent position and/or academic promotion.

University Scientist Stage: A wide variety of types of position, though the available slots are generally far fewer in number than in preceding stages (limited by funding prospects or by tight regulation of academic employment). There are also high-status independent research fellowships, which may or may not be accompanied by a permanent university appointment. In some systems, these more senior academic positions are strictly age- or time-limited, creating a strong up-or-out pressure which cannot always be adequately accommodated. This stage is also occupied by long-term scientific staff members, who have limited research independence and few promotion prospects. Generally employed under a fixed-term transitional appointment, these positions may become effectively permanent.

Professor Stage: Usually characterised by full tenure, although some systems also employ high-level professorial fellows on short-term teaching contracts or five-year specialised research grants. It is often characterised by different grades of seniority and responsibility, and sometimes with complex appointment and promotion procedures.

25. We have also developed “career maps” that follow the broad four-stage format and which graphically represent the maze of options which researchers must navigate in their own careers. They show the different research positions available in each institution, the broad levels of responsibility and how these positions are funded at each stage. They have been developed for 15 LERU universities in nine European countries, and provide information which is not usually and easily available, either to universities or to researchers. One such example of a career map is given in Box 2 and more examples from LERU universities may be found in Appendix 1.

26. The career maps reveal clear differences in the way our universities structure academic careers and career expectations. In some systems, short-term contracts are only used at the beginning of a researcher’s career, with researchers ‘working their way up’ to more stable employment. However, some universities face difficulties because permanent

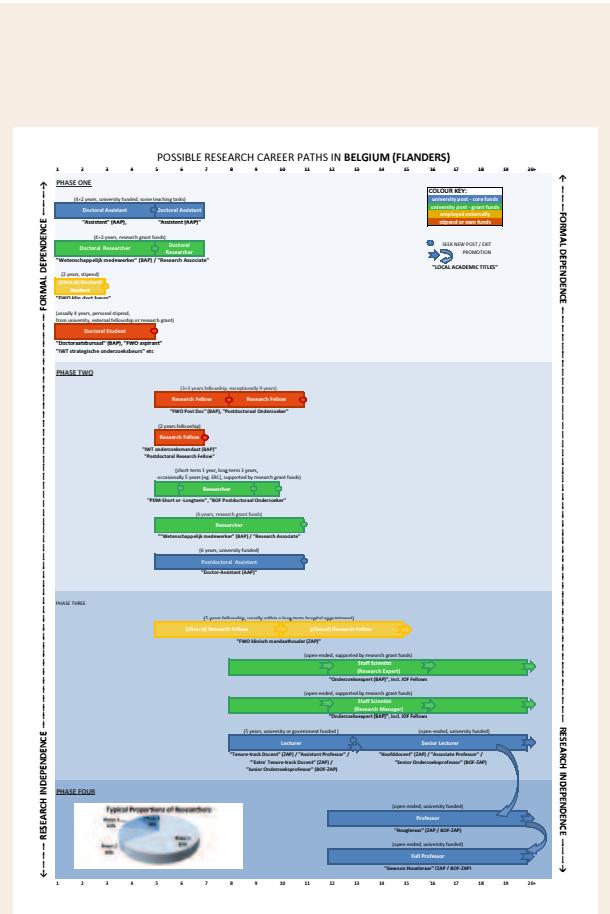
employment is awarded at a very early stage in a researcher's career (e.g. France, Italy, Sweden). Other universities face difficulties because of temporary, "serial contracts" that may persist even for very experienced researchers (e.g. Switzerland, United Kingdom). The most interesting innovations (and debates) surround transitions from one stage to the next. The maps graphically present the maze of options which our researchers are attempting to navigate individually in their own careers.

THE FRAMEWORK FOR RESEARCH CAREERS

27. If research careers in Europe are to be attractive to some of the best graduates from Europe and from the wider international pool of talent, then not only must

Box 2 - Career maps

The career maps have been developed by LERU in collaboration with many academic and management staff members at LERU universities. The maps show the different research positions available in an institution, the levels of responsibility, and how they are funded at each stage. Red indicates positions which are funded by stipend rather than as salaried employment. Green marks positions supported by fixed-term grants. Blue indicates academic positions supported by core university funding. Orange indicates researchers with positions funded by external sponsors (either by research councils or industrial partners), although they carry out their research within the university. The charts show the key promotion phases or enforced exit points and the main bottlenecks in academic career paths and help to demonstrate how research positions fit together and into the university structure. The career maps have proved useful to individual universities in depicting the current situation, in offering a means of comparison and in considering alternatives, as universities adapt their career pathways to better suit long-term needs. Some universities have posted their institutional maps online to help researchers better understand career options. More career maps from LERU universities are shown in Appendix 1.



employers provide a stimulating intellectual environment in which early career researchers have freedom to exploit their individual creativity, but they must also provide strong, structured support for career development. We identify five vital pillars designed to give such support: well-designed employment and posts; well-structured career opportunities; well-financed positions; well-supported career development; and research careers as a shared responsibility. For each of these categories, we identify below the main challenges and key principles, and in series of boxes give examples of good practice from LERU universities. Appendix 2 contains a LERU Model Code of Practice for Research Employment, which all LERU universities are working to implement.

Well-designed employment and posts

Challenges

28. University research positions are strongly shaped by academic traditions and external funding arrangements, and are frequently not well-adapted to the purposes of the research that they are supposed to support. Examples include short-term funding to support long-term research objectives, research posts advertised where the need is for a highly prescribed technical contribution, and the lack of short-term funding for short-term urgent or opportunistic proposals. On the one hand, when new types of position are developed it is often unclear how they relate to and articulate with existing opportunities. On the other, they are often not optimally designed for the intended purpose, but rather to fit with existing categories of post or systems, or simply with the desire for consistent arrangements within an institution.

29. At national or EU levels there is often a mismatch between high-level processes and policies and efficient practice in institutions. In many cases, staff salaries and employment conditions are largely managed by the state, leaving universities with little room for strategic manoeuvre and with an unclear distribution of HR responsibilities. Strict EU funding conditions for the hire of researchers often hamper the implementation of national legal requirements and good HR practices (for example, it is not permitted to pay the gap between salaries and allowances during maternity leave; there are restrictions on pension arrangements, etc). Outside high-level policy circles, the European

Charter and Code¹⁰ are not widely known. Consequently, they do not contribute as much as they should to better employment practice in universities.

30. Within institutions, there are often inconsistencies and *ad hoc* practices that obfuscate what should be clear contractual relationships. Whilst lengthy and inflexible recruitment procedures are common for senior posts, recruitment at junior levels is often completely decentralised and unmonitored. Working arrangements for post-doctoral researchers are often determined entirely by their project leaders, with the result that research and employment conditions for doctoral students are frequently much better protected than for post-docs. *Ad hoc* employment arrangements are often made for foreign contract researchers, with the legal and financial arrangements that should govern them not always being clear. Such experiences do not adequately prepare researchers for their subsequent careers, whether they be academic or outside the university.

Key design principles for research posts

31. All research positions, at every stage of a researcher's career, must be properly designed to fulfil their research and career objectives. The responsibilities and objectives of the post need to be clearly set out, to provide a firm foundation for the next career step.

32. Universities hold the primary HR responsibilities for their researchers, whilst recognising and supporting the critical roles of academic mentors and research funders in a researcher's professional development. All post-doctoral researchers should be employed through the university payroll and provided with social security cover and pension entitlements. The use of stipends without provision for social security benefits should be strongly discouraged, and where necessary, supplemented by the institution to ensure that all researchers (domestic and foreign) are provided with equivalent employment conditions. Consistent and transparent recruitment, hiring and promotion procedures should be followed throughout the institution. All research positions, including entry-level posts, should be advertised openly and internationally. Senior researchers in management positions should also be provided with professional HR support and training.

33. Researchers at all stages of their career require opportunities to develop research independence and responsibility and to claim credit for their achieve-

¹⁰ European Charter for Researchers and Code of Conduct for the Recruitment of Researchers. European Commission (EUR 21620). 2005.

ments. Adequate support funds need to be available for young researchers to develop their own projects, to seek external funding and to take up opportunities for mobility. Young researchers should be enabled to acquire teaching experience and be provided with appropriate support in this, though avoiding allocation of excessive teaching loads. Box 3 describes some of the actions by LERU universities aimed at providing well-designed employment and posts.

Well-structured career opportunities

Challenges

34. The short-term funding horizons of universities, whose function is to provide longer-term perspectives for society, can cause major perturbations in the tempo of their work and the careers of their researchers. This often makes it difficult for universities to maintain the momentum of their efforts, leading to inefficient and disruptive “demographic pulses”: waves of retirement and appointment that are quite unrelated to the needs or performance of the institution. This has created a “parallel world” of informal, temporary positions, as universities use short-term lectureships or research contracts to bridge gaps. These complications make it difficult to assess the current talent sets in our universities, or to plan for future HR needs.

35. The inflexibility of many external research awards means that women are still less likely to reach senior positions, as research awards and pension schemes do not recognise part-time research employment that is often needed when they have children. Where

researchers are employed on a succession of short-term contracts, the lack of a career perspective creates difficulties with discontinuous social security cover, obtaining mortgages, etc. Compulsory exit points or tight employment regulations can force premature exit even when continued research funding is available.

Key principles for structuring research careers

36. All research posts should fit into a structure of opportunities in the university sector, but also need to consider how the university segment will articulate with non-university public and private sector posts, both for those moving from university into those sectors and those moving from them into universities. There should be no “dead end” positions which do not give a researcher the necessary experiences and skill-building to advance their career either within the university or in employment elsewhere. All research employment should be designed to provide a broad base of experience that is relevant to a range of future careers. Universities should clearly position academic posts within a transparent and coherent career framework, with entry points and promotion points clearly signposted. Employment instability is often an uncomfortable side-effect of research dynamism and competitiveness, and researchers need to be provided with adequate support to negotiate this reality.

37. International mobility, and exposure to a variety of research environments is essential to the development of a well-rounded academic career. Both long-term and short-term mobility periods should be supported and encouraged at all stages of a researcher’s career. Recognition should also be given to a wider range of

Box 3 - Designing research posts: good practice from LERU universities

- Almost all LERU universities have recently introduced new and innovative types of academic position such as “tenure-track”, “young professors”, “research managers” and “junior group leaders”, together with a dual careers provision in order to attract and support high-flying researchers at critical stages in their careers. Much careful thought goes into designing the job conditions required to make these research posts an attractive career choice, even when not a permanent appointment.
- In many of our universities, post-doctoral roles and requirements are being formally and clearly defined with consistent expectations for each level of appointment.
- Some universities are also requiring researchers to articulate their research work within the institution’s strategic research focus areas.
- Several of our universities provide locally-situated HR support at the level of the department, thus offering professional assistance for personnel matters directly “where it is needed”.

“internationalisation activities”, such as participation in European networks, conference attendance etc. Box 4 describes some of the actions by LERU universities aimed at providing well-structured career opportunities.

Well-financed positions

Challenges

38. Universities’ capacities to offer more attractive research positions, or longer-term commitments, are predominantly limited by available funding. Money is short, whilst careers and research challenges are long. The manner in which money is made available to universities often conspires to undermine their capacity to create a more stable framework for research careers even within current financial envelopes:

- few research grants cover full economic costs or contribute adequately to university personnel costs, which preferentially and perversely penalises the most successful institutions that have the greatest research capacity;
- in many national systems, formula funding for university personnel is based only on teaching and student numbers, not on research outputs;
- government initiatives and funding projections are unreliable and change rapidly, leading some universities to attempt to force their government’s hand by accepting long-term employment commitments for talented researchers, even when future funding has not been confirmed;
- academic salaries in many countries may be relatively unattractive, and many are tightly regulated, making it difficult to pay the international market

rate for talent or hire or retain people with industrial or specialist expertise; in some cases a university is able to fund new posts but the state, where it is responsible for pensions, may refuse permission to appoint;

- international mobility continues to be poorly supported, particularly for senior researchers.

Key principles for financing research positions

39. Few remedies to the situation outlined above lie in universities’ hands, so that the implementation of the following key principles rests heavily with national or EU authorities:

- Research career opportunities must be adequately financed. Governments and other funders need to provide fewer short-term and more closely integrated initiatives. National funding councils and the fellowships they offer will necessarily play a defining role in shaping academic research career tracks, such that collaboration between them and universities as partners in policy initiatives are crucial.
- Financing of research positions by industrial partners is to be welcomed, as long as academic independence is maintained and the full economic costs of research personnel are adequately calculated and recouped.
- Long-term personnel commitments, such as tenure, should be subject to careful financial projections and only offered when there is a clear funding perspective to pay for these.
- Researchers should be remunerated at a level appropriate to their experience and responsibilities, and promotion opportunities should be available within each career rank. Box 5 describes some of

Box 4 - Structuring research career opportunities: good practice from LERU universities

- Many LERU universities are re-designing their academic career track, to provide their researchers with more integrated and coherent career paths. In some cases, recognised career pathways are being developed for specialists and research managers as an alternative to the classic academic track of independent research leadership roles.
- Some countries have influential and well-designed national fellowship schemes targeted at particular career stages that provide clear frameworks of opportunities and important “stepping stones” for researchers.
- Bridging grants may be used to help researchers to maintain continuous employment when direct research funding comes to an end, or to provide a “soft exit” to researchers at the end of a project.
- Equal opportunities support is generally well-developed in our universities. Initiatives to support women researchers often serve as useful pilot exercises for developing support mechanisms which are later extended to all academic staff.

the actions by LERU universities aimed at providing well-financed positions.

Well-supported career development

Challenges

40. Career support is often considered an optional “add-on”, and not well-integrated into a university’s policies and general practice. Whilst LERU universities offer a wide range of career support initiatives, take-up and impact is still limited in most institutions, and long-term funding for these activities is not always stable. Training programmes are generally targeted at PhDs and early post-docs. Few universities provide training support that addresses the needs of senior academics.

41. Senior researchers often see it as part of their mentoring role to keep researchers in their labs for yet another short-term contract. “Charitable recruitment” of former students and post-docs is widespread, which discourages post-doctoral researchers to consider other possibilities or non-academic career options.

42. The non-academic route for researchers tends only to be considered when academic avenues for advancement have failed. It is crucial that this is seen as a positive move in many, possibly most cases. Researchers often receive mixed messages about career prospects, rather than clear and realistic information. The number of disconnected schemes makes it diffi-

cult to advise researchers adequately on career gateways, career pathways and funding opportunities.

43. Non-permanent researchers are not adequately integrated into the broader academic life of the university. There are rarely mechanisms for communicating with these groups, or for representing their views in university decision-making.

Key principles for supporting career development

44. All researchers are entitled to career support and skills training whilst they are members of the university. Universities should create and support an institutional strategy for enhancing staff development, and provide adequate recognition and support for the highly professional career counseling schemes already run by universities. They should provide career advice and supporting processes, particularly about non-university possibilities. It is important to give “early warning” when permanent employment is unlikely to be realised within the university. Alternative career paths should be signaled and explored as positive career choices. This requires subject-specific career advice about non-university public and private sector opportunities to be made available. It would also be very valuable if universities could use their contacts with external bodies that employ researchers to explore the possibility of mentoring links for younger researchers. Realistic career perspectives should be discussed from the start, including the likelihood (or lack thereof) of longer-term academic employment. It

Box 5 - Financing research positions: good practice from LERU universities

- Some universities ensure that young researchers are adequately supported by specifying minimum acceptable funding levels for post-docs.
- Early career researchers benefit greatly from simple funding schemes which assess and reward research potential rather than an extensive achievement record. Some of our universities provide institutional supplements to early-stage researchers, to allow them to attend conferences, purchase consumables, etc.
- Many LERU universities now have increased powers to award special salary packages to high-flying individuals.
- Some assist senior researchers to migrate to a permanent position following a research fellowship, and carefully plan ahead for the required resources.
- In some universities, researchers receive re-integration assistance to help re-establish their research after periods spent abroad (e.g. Sweden, Finland).
- Even in well-supported research funding environments LERU universities are publicly promoting the need for longer, larger research grants for research teams to increase stability and career perspectives. Long-term fellowship grants for younger researchers in some countries have led to development of powerful cohorts of highly professional, mature researchers.

is particularly important that flexible arrangements are made in all research posts that allow women to accommodate child-bearing without necessarily losing momentum or progression and families to achieve a reasonable work-life balance.

45. Departments and supervisors should be required, as part of university policy, formally to oversee the career development of researchers. Although informal contacts among colleagues will often be a highly significant influence on researchers' career development, in-house and targeted training, designed in partnership with academics, should be actively encouraged. All early-stage researchers should be granted an agreed proportion of working time for training, internships, collaboration with external partners and work experience in other fields, in order to provide them with a wide range of skills and experience which has broad value in a wider job market.
46. Promotion and appointment procedures should recognise non-research related achievement and contributions, such as teaching, course development, and administrative duties. Box 6 describes some of the actions by LERU universities aimed at providing well-supported career development.

Research careers as shared responsibilities

Challenges

47. Uncoordinated initiatives by governments, research funders and individual universities create confusion about career perspectives and long-term career pathways. This is exacerbated when funding arrangements change frequently, and compounded by poorly communicated policy for research careers. There is often a dispersion of responsibility for human resources, which can leave individual researchers critically unsupported. In particular, some research group leaders do not fully recognise their responsibility to develop the careers of those working directly for them.

Key principles for sharing responsibility for research careers

48. There needs to be close coordination and communication between the bodies that fund research positions, those that formally employ researchers and those who make the individual hiring decisions. It is important that the funders of research, including government, business, national academies that fund research and charities should meet with university representatives, including supervisors, to discuss the structuring of research careers and their funding.

Box 6 - Supporting career development: good practice from LERU universities

- Many institutions are improving their ability to track and support their researchers' progress, by setting milestones and agreed targets, and offering regular performance reviews.
- Some LERU universities provide early-stage researchers with specialist teaching and pedagogical training, and include teaching experience in performance assessments.
- Many offer grant-writing assistance and other "master-classes" to help high-flyers make the most of national and European funding opportunities.
- Many offer extensive transferable skills training, and in some, even offer ECTS credits to post-docs who complete these courses. Some universities support their researchers in putting together personalised training packages that are targeted to their individual needs.
- Some of our universities provide their researchers with detailed online resources about career possibilities, as well as one-to-one careers advice. Some have developed sophisticated ways of assessing the effectiveness of their career initiatives.
- All LERU universities invest in their research talent. Some have developed innovative strategic leadership programmes for future academic leaders. New interdisciplinary academies in some LERU universities provide some non-permanent Research Fellows with a stimulating academic home.
- Many are increasingly utilising European internet portals and international networks (e.g. Nordic research networks) to improve the advertising of available positions.
- Tracking exercises to monitor the career progression of PhDs once they leave are commonly carried out by LERU universities. These should be expanded to include post-docs and researchers at later stages in their careers, in order to better understand their career choices and mobility patterns.

Because of the increasingly important European dimension of research careers, ERC representatives would provide a valuable means of ensuring that evolutionary developments take this dimension into account.

49. National funding bodies need to offer fewer ‘initiatives’, and more integrated support for universities’ personnel requirements. National governments need to ease legislative restrictions to allow universities more flexibility and autonomy in hiring decisions. Universities could better coordinate institutional policies, particularly within the same national system. Young researchers need to take more active responsibility for their own careers, and be provided with accurate and timely information about alternative career pathways. Funders need to provide more support for mid-career researchers to achieve research independence, as this is a key bottleneck in many systems. Box 7 describes some of the actions by LERU universities and others aimed at sharing responsibility for research careers.

the one hand that of the institution in developing its research productivity and reputation, and publication of papers in “high impact” journals; on the other hand that of the individual to develop a strong career that may span many different phases of employment. The implication of this report is that the greater public interest is in the latter rather than the former, in well-developed and creative people rather than merely successful projects or published papers, although of course the two are related. We should therefore seek to ensure, no matter which part of the spectrum of research posts is considered, that support for the developing career is optimised whilst contributing to the ostensible objective of the institution.

51. For this purpose we have subdivided what is essentially a spectrum into a series of functional types of post. Although they have different funding, contractual and structural relationships across Europe, as shown in box 1, they represent the principal functional types of research post. Ideally, we would like to move towards a system where the principles summarised in paragraph 14 and amplified subsequently, would apply to all, though adapted by the following considerations which highlight important aspects of each functional type of post:

- **Personal research fellowships.** These are highly competitive post-doctoral or professorial fellowships that permit independent researchers to dedicate themselves to research of their own choosing. Our concern is primarily with the former, where we strongly advocate relatively long-term support, of five years or more rather than the typical three years. A

RESEARCH POSTS THAT ARE FIT FOR PURPOSE

50. There is a range of purposes for which research posts are offered, and it is important to recognise that in almost all cases two parallel motivations coexist: on

Box 7 - Good practices in sharing responsibility for research careers

- In the UK, a national concordat between research councils, universities and researchers is in place to support the appropriate management of research careers¹.
- In other countries, more informal policy coordination with key stakeholders (social partners, employers, trade unions, professional associations) is becoming institutionalised in regional or national committees and working parties.
- The European Code and Charter and the UK concordat recognise explicitly the mutual obligations of researchers and research employers.
- Through its Working Group on Research Careers, LERU universities have worked together to better understand the variety of issues and trends facing our members in the area of research careers. The activities of the Working Group have addressed research employment patterns, academic career structures, financing arrangements, career support and stakeholder involvement.

¹ <http://www.researchconcordat.ac.uk/>

longer term permits the most talented researchers to develop their ideas, their work and their networks most creatively without the immediate pressure of finding continuation funding or delivering project results. The numbers of such fellowships should be dramatically increased. They should be open to non-European applicants. Those offered at European level, which should be a major priority for Framework funding, should be portable to permit work in the location best suited to the fellow and their project, as is the case with ERC Starting Grants. We stress the importance of "purposive mobility".

- **Research associates employed through research grants.** A large proportion, possibly the majority of those who go on to permanent academic posts or research careers, pass through this route. It is therefore important that it provides strong support to the development of the researcher. Too frequently however, researchers are exclusively required to work to the direction of a principal investigator, without sufficient space for their own individual research and its development, or the attention to the principles of career development described in paragraphs 45-47. Research teams are an increasingly prevalent vehicle through which research is done, and whilst they can provide an important environment for learning and progress by a young researcher, it is vital that the latter are not merely seen as cogs in a research machine. The team must take responsibility for ensuring that there is good support for career development, and opportunities for young researchers to exercise personal creativity and responsibility.
- **"Enterprise fellows".** Novel fellowships that offer holders support in developing commercial applications from their research are increasing in number¹¹. Holders need management, commercial and legal advice and are often provided with seed corn funding. Their special requirements need a distinctive response, particularly as many have taken risky steps away from more secure career paths.
- **Research assistants employed through highly specific research contracts.** Most such contracts are derived from commercial companies or government departments. In such circumstances, the opportunity for independent, personal work is usually very limited. However, many of these posts are taken by those who aspire to a research career to fill in gaps between other posts. It is important, if possible, that the potential for independent research

and/or the production of research papers by the research assistant is negotiated in the contract.

- **Research assistants/high level technical officers.** Such posts are particularly crucial in much research where high and rapidly evolving technology is involved. Researchers in these positions should be considered as partners in the research process, and as authors on published papers where appropriate. Their career development, through support for continual upgrading of their skills and promotion, should also be given high priority.

RESPONSIBILITIES FOR IMPROVING THE STANDING, ATTRACTIVENESS AND EXCELLENCE OF RESEARCH CAREERS

52. The maintenance and development of a globally competitive research base in Europe depends fundamentally on its ability to attract and retain the best talents from Europe and beyond within a framework of structures, processes and opportunities that researchers are able to exploit to good effect. This implies three crucial dimensions: well-structured careers; a social setting that stimulates and supports creativity; and opportunities and facilities through which to deploy it. It is important that those who bear the responsibilities for these aspects recognise the imperative and respond to the challenge.
53. The stakeholders in these processes are: governments, which determine overall national policies for research that is funded from the public purse and which may employ the staff of universities as civil servants; national research councils, the European Research Council and the European Framework Programmes which determine detailed processes through which public funds support research and researchers; charities and businesses that fund research in their respective areas of concern; and universities and other institutions that employ and provide the base for researchers and their research. Some of the issues addressed in this report are the joint responsibilities of several stakeholders, others are specific to individual stakeholders. The priority issues that need to be addressed by stakeholders are as follows.

¹¹ For example: http://www.rse.org.uk/research_fellowships/bbsrc.htm

54. The optimal environment supporting the work of researchers is one where there is a strong research effort, contact with a diversity of researchers across a range of disciplines, good international links and with access to appropriate facilities. Responsibilities lie with:

- *Universities* in creating and managing such environments (paragraph 16).
- *Funders* in ensuring that early-career researchers in particular are preferentially located in such environments.
- *National and European research agencies* in ensuring that expensive facilities beyond the pockets of individual institutions are available to talented European researchers irrespective of their place of work.
- *Governments and the European Commission* in addressing barriers to mobility, including pension rights and the portability of research grants.

55. Independence and responsibility should be embedded in the post concept by ensuring that for those early-career researchers not in receipt of a personal fellowship, space is formally created to support the development of personal creativity, and that there are opportunities for all to undertake broader responsibilities and to apply for research grants to support their personal research. Responsibilities lie with:

- *Research funders* to amend their conditions of grant and to manage a scheme for grant proposals.
- *Universities and departments* to create a formal framework for these changes.
- *Principal investigators* to be sensitive to the personal needs of researchers on their projects.

56. Well-designed posts that are clearly defined in relation to the structure of research career progression, with clearly defined working arrangements, standard and transparent procedures for appointment and an absence of dead-end positions. Responsibilities lie with:

- *Universities* to ensure that their practices comply with these imperatives.
- *National and EU policy makers and funders of all types* to ensure that their funding policies emphasise or demand good practice.

57. Career structures that are clearly designed for their different purposes (paragraph 51), but that provide a comprehensible career framework, well sign-posted pathways within and beyond the university and with

the potential for non-disruptive international experience. Responsibilities lie with:

- *National and EU research agencies, private funders, together with government where they control careers, and universities* working together to address this issue.
- *Universities* to ensure that career advice is offered at an early stage and that non-academic pathways are clearly identified and positively promoted.

58. Career development support procedures, including relevant skills training, career counseling that includes the option of non-academic routes, arrangements for career development well-adapted to the needs of the individual, and consideration of wider promotion criteria. Responsibilities lie with:

- *Universities* to ensure adoption and implementation of appropriate policies.
- *Research funders* to require the latter as a condition of funding.

59. Finance that is adequate to ensure that research posts are funded at internationally competitive levels so that they attract talented individuals; that funding is allocated and managed in such a way that universities can be flexible in adapting to the needs of research and researchers; and funding that covers full economic costs so that the most successful research institutions are not progressively impoverished by their success. Responsibilities lie with:

- *National and EU research agencies* to devise appropriate processes and patterns of funding.

60. The issues that are raised above are interwoven parts of a tapestry that determines the attractiveness and effectiveness of research careers. Whilst the LERU universities, and others, will continue to work to discharge their responsibilities in ways that address these issues (boxes 3-7), not all the levers are in their hands¹². It is vital therefore that there is stronger interaction between stakeholders at both national and European levels if we are to enhance the standing and support for the most important pillar of any research system, namely the quality of the people working in it. Such interactions are also means whereby the European Charter for Researchers and individual national initiatives can be effectively implemented.

¹² We recognise that the pattern of responsibilities varies amongst European countries, primarily as a consequence of the extent of university autonomy, and therefore that the patterns of responsibility identified in paragraphs 55-60 will vary to some degree.

APPENDIX 1 - ACADEMIC CAREER MAPS IN EUROPE

The career maps below have been developed by LERU in collaboration with numerous academic and management staff members at LERU universities. The maps show the different research positions available in an institution, the levels of responsibility, how they are funded at each stage and how a researcher may progress from one level to the next¹³. Red indicates positions which are funded by stipend rather than as salaried employment. Green marks positions supported by fixed-term grants. Blue indicates academic positions supported by core university funding. Orange indicates researchers with positions funded by external sponsors (either by research councils or industrial partners), although they carry out their research within the university. The charts show the key promotion phases or enforced exit points and the main bottlenecks in academic career paths and help to demonstrate how research positions fit together and into the university structure. The career maps have proved useful to individual universities in depicting the current situation, in offering a means of comparison and in considering alternatives, as universities adapt their career pathways to better suit long-term needs. Some universities have posted their institutional maps online to help researchers better understand career options.

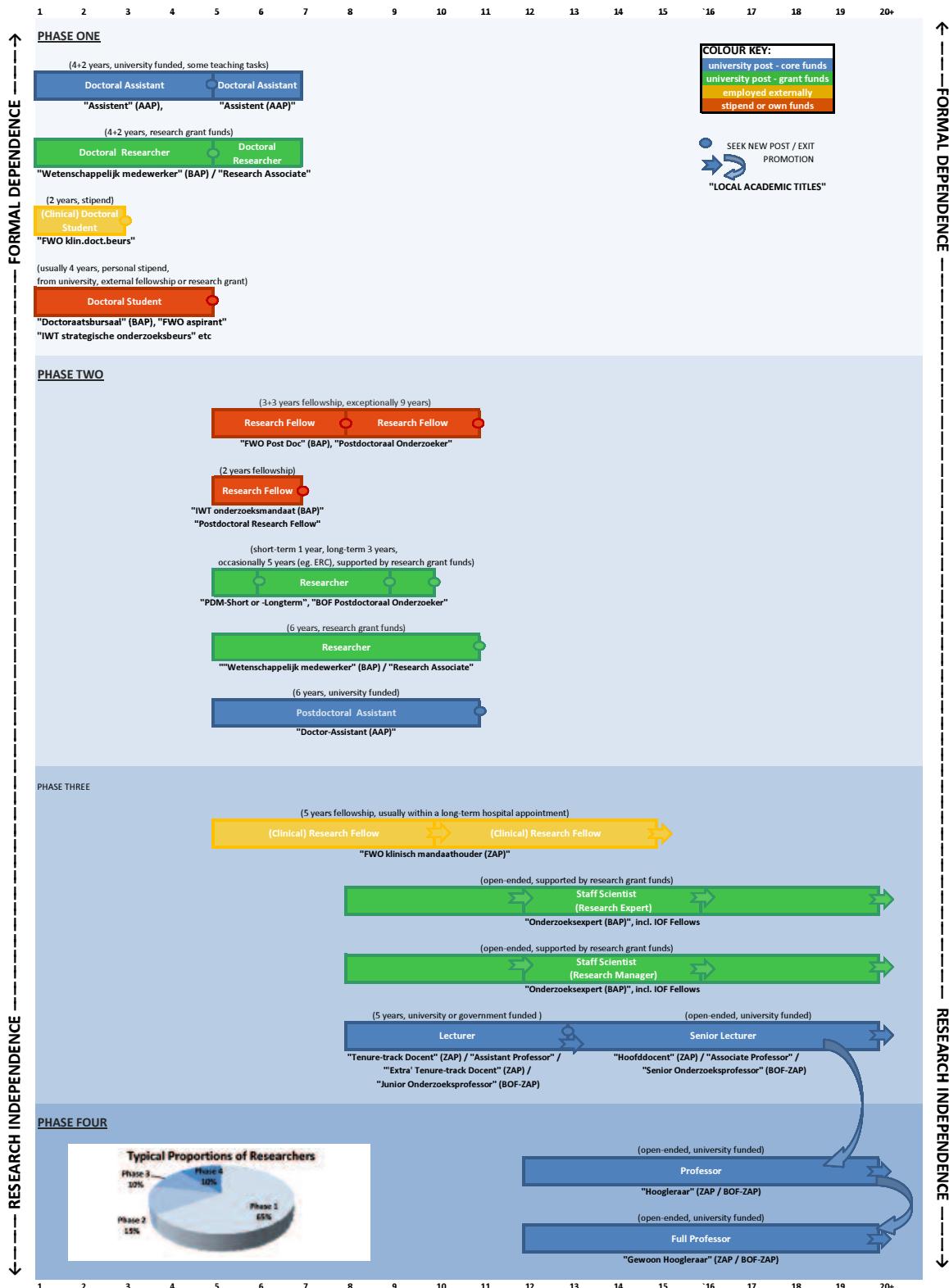
The maps reveal clear differences in the way LERU universities structure academic careers and career expectations. In some systems, short-term contracts are only used at the beginning of a researcher's career, with researchers 'working their way up' to more stable employment. However, some universities also face difficulties arising from the award of permanent employment at a very early stage in a researcher's career (e.g. France, Italy, Sweden), and other universities face a different set of issues arising from the employment of senior researchers under temporary, "serial contracts" (e.g. Switzerland, United Kingdom).

Research quality is the obvious key to career progression at all LERU universities, but there are considerable differences in the amount of "openness" in our systems (the recruitment/promotion balance, indicated with "progression" arrows on the maps). The most interesting innovations (and debates) surround 'transition points', particularly the "gateway" to the full professorship. The key pressure point is often mid-career, when people "fail" to achieve a professorship, and other career options close off, which can result in a difficult career reorientation at a late stage.

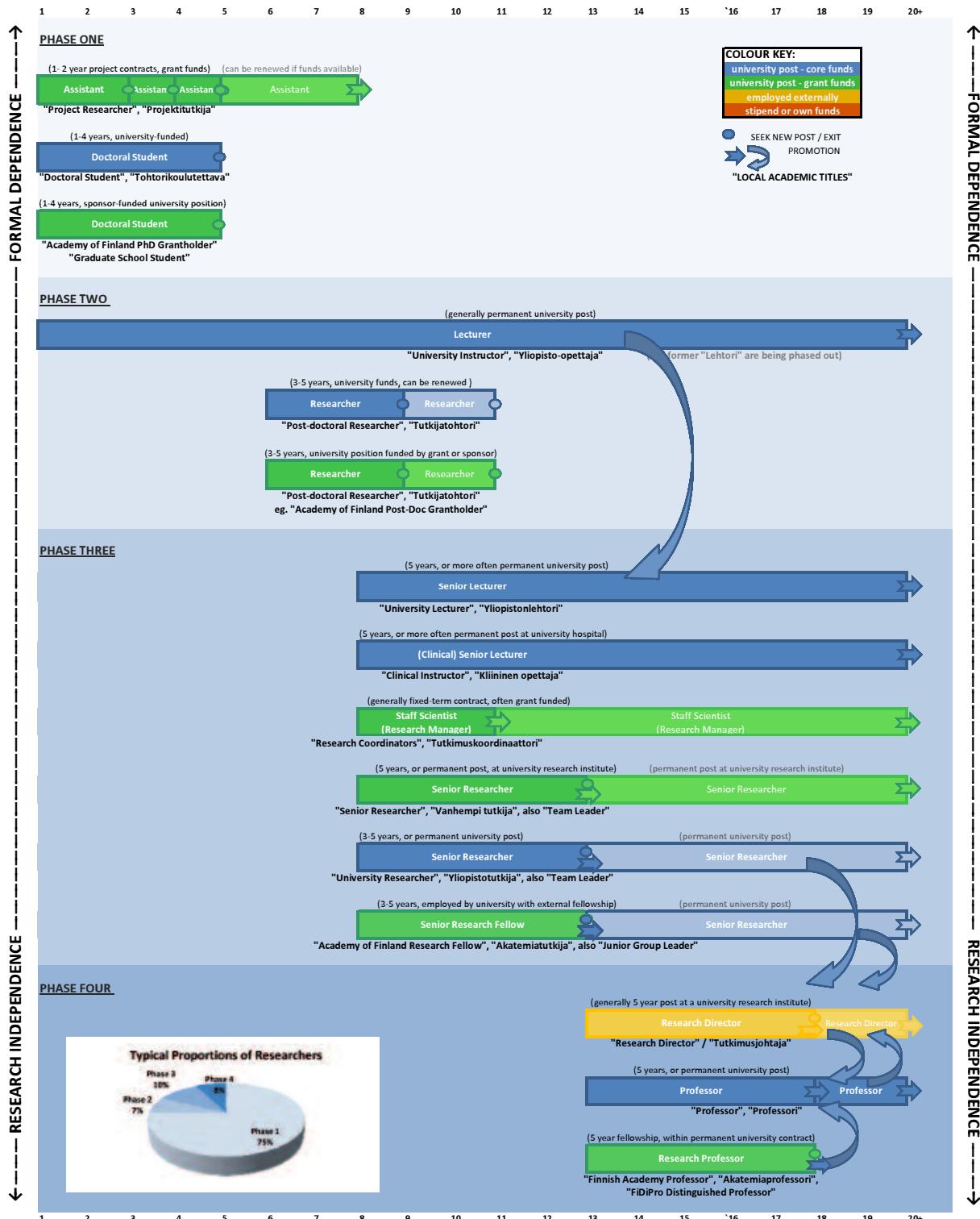
The career maps have allowed a broad mapping of equivalencies between the various systems, but the detail still demonstrates extraordinary diversity. Although such a varied research career landscape provides many opportunities for researchers, there is a serious need for increased transparency and better articulation of research positions, both within and between universities.

¹³ The career pathways describe generally applicable phases rather than strictly sequential stages. They are subject to individual and institutional variations and the time periods given are indicative. Since national rules generally govern research career pathways to a greater extent than do policies at individual institutions, the maps do not name specific institutions and only one map per LERU country is provided.

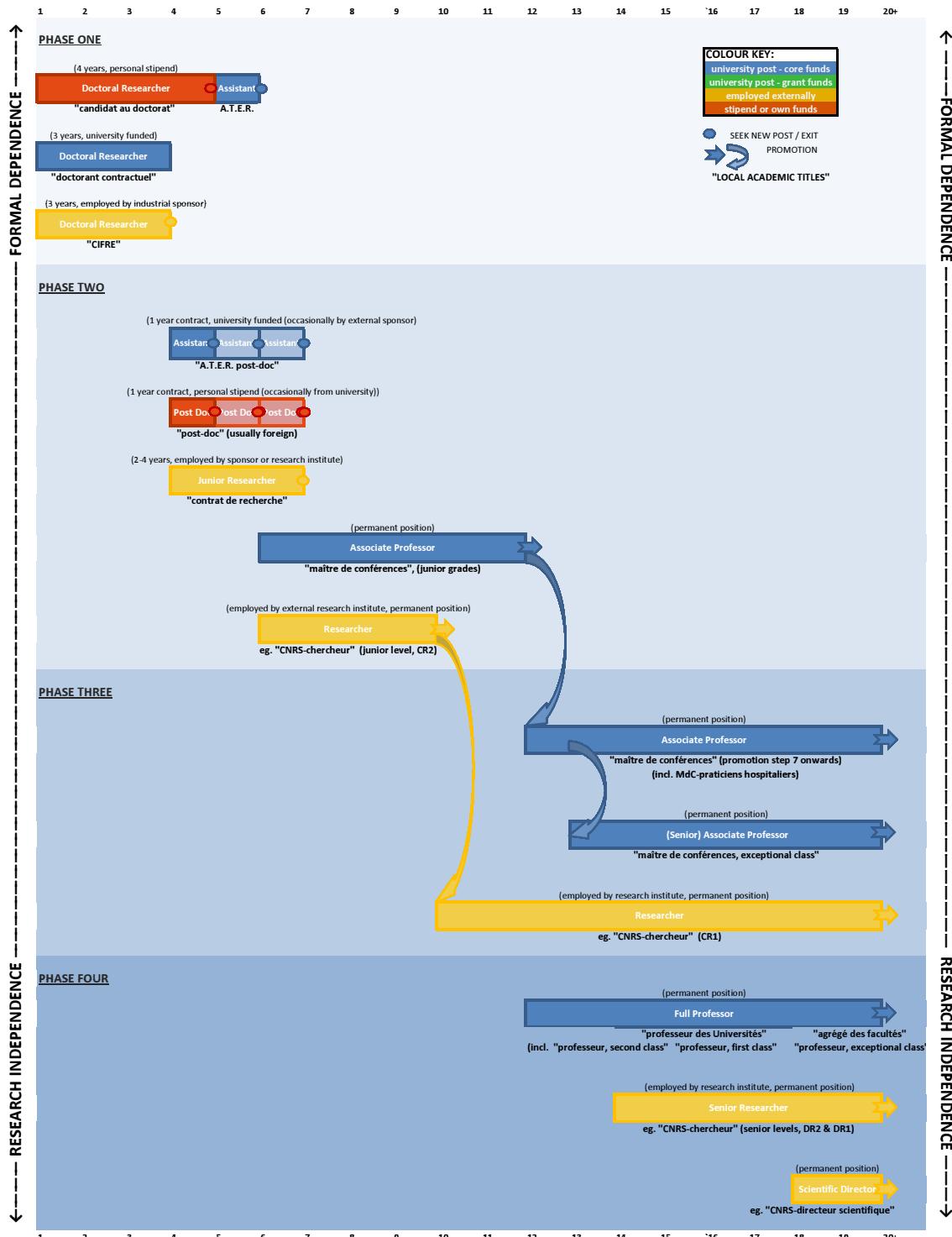
CAREER PATHS OF UNIVERSITY RESEARCHERS IN BELGIUM (FLANDERS)

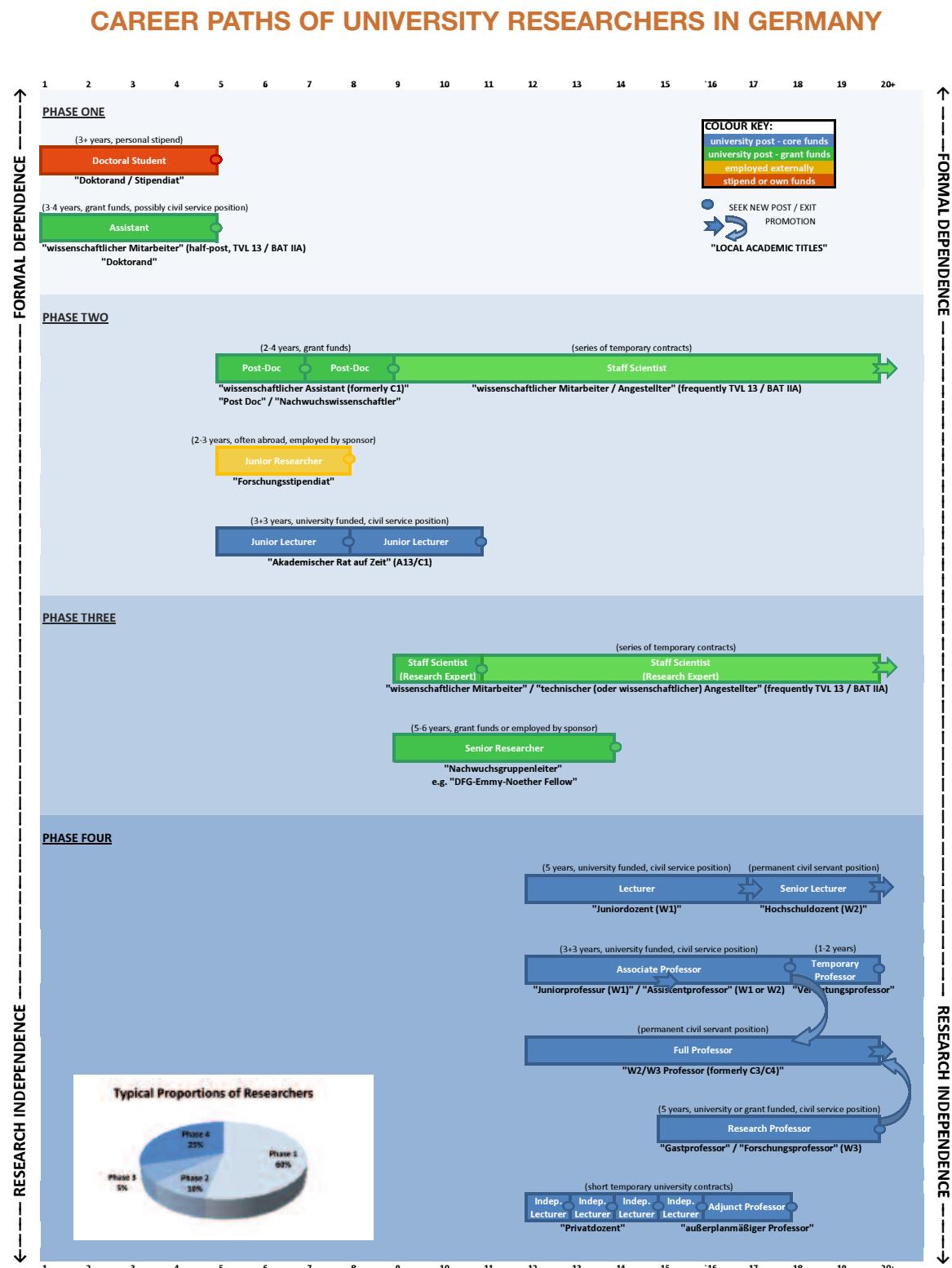


CAREER PATHS OF UNIVERSITY RESEARCHERS IN FINLAND

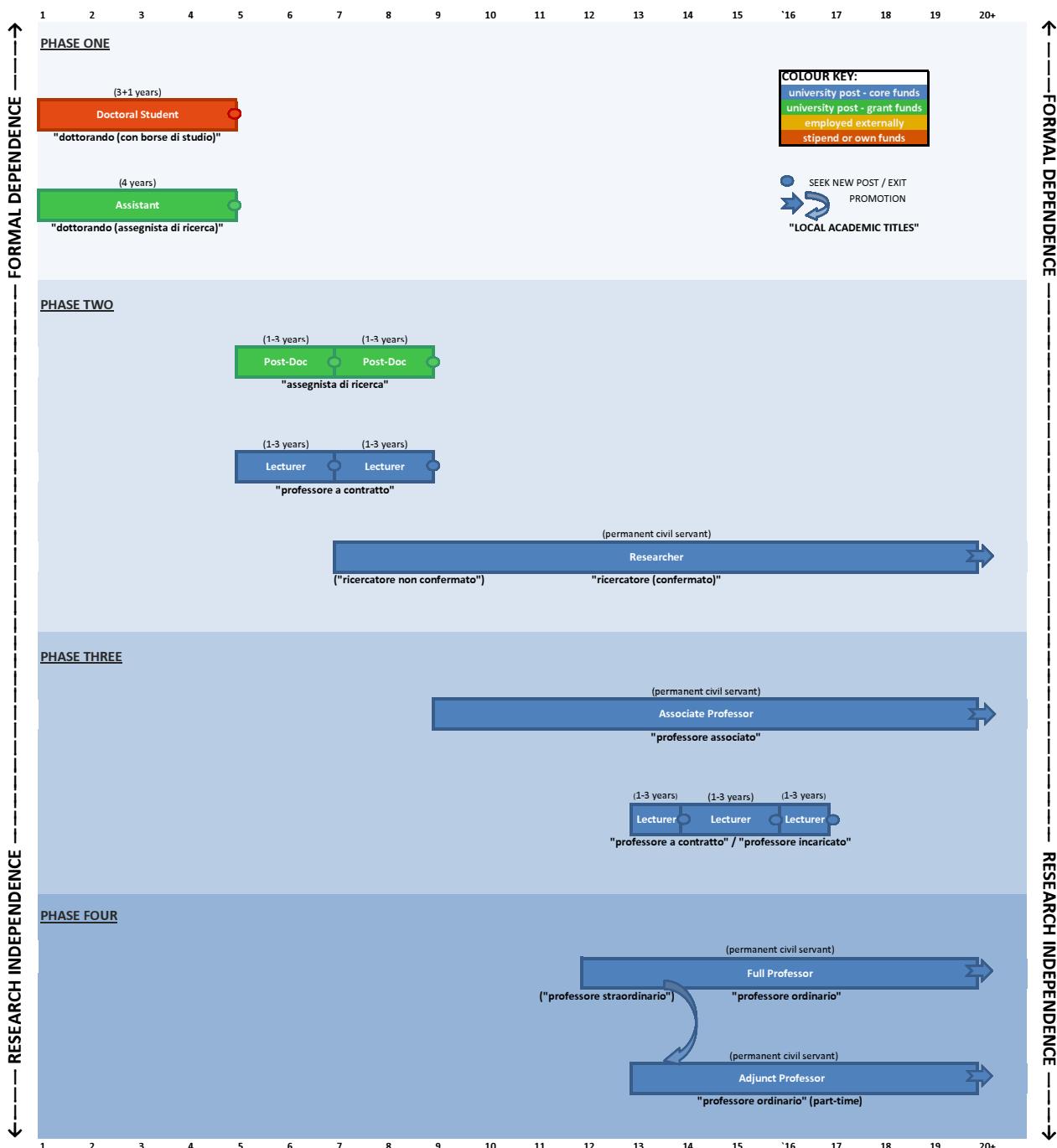


CAREER PATHS OF UNIVERSITY RESEARCHERS IN FRANCE

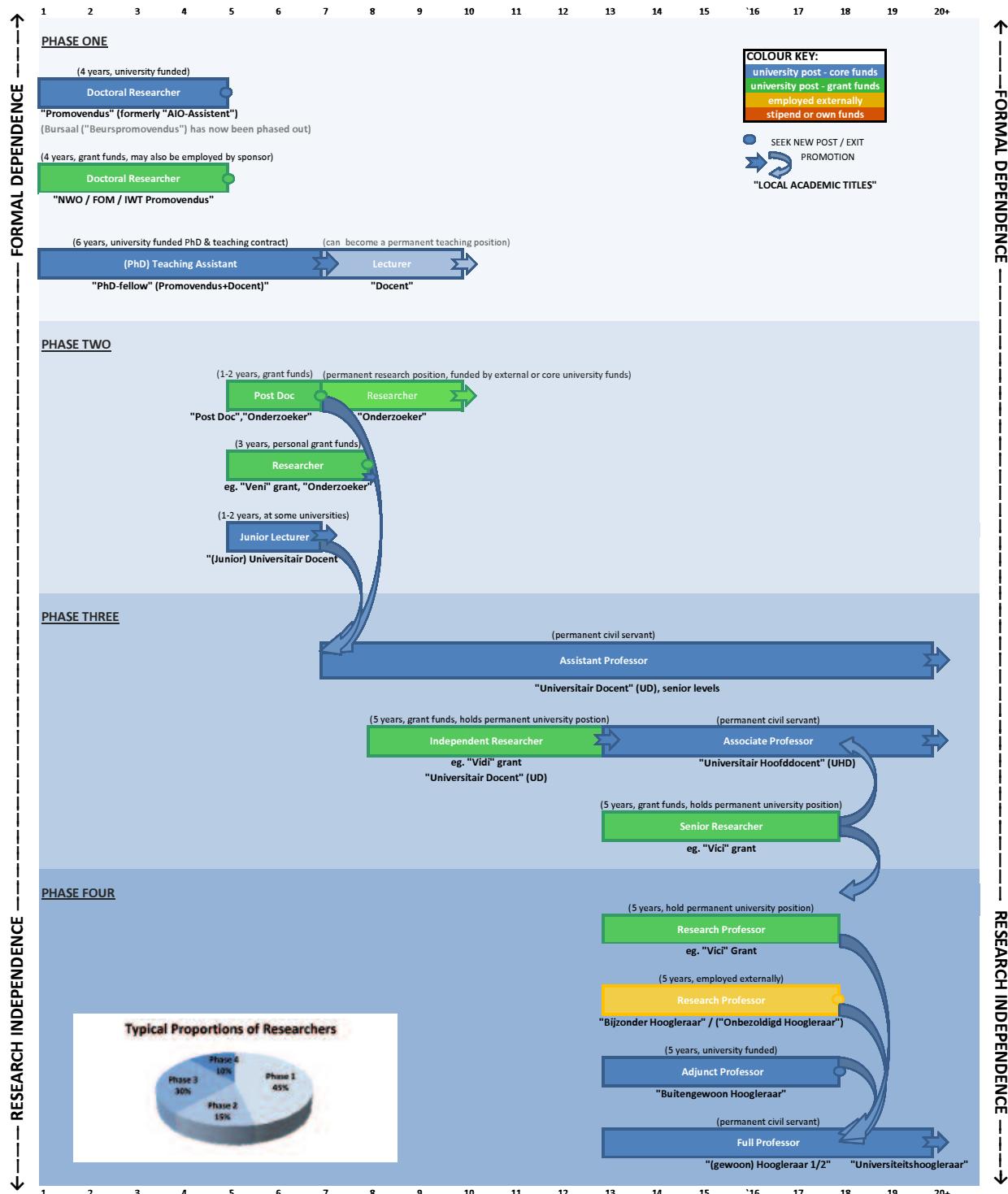




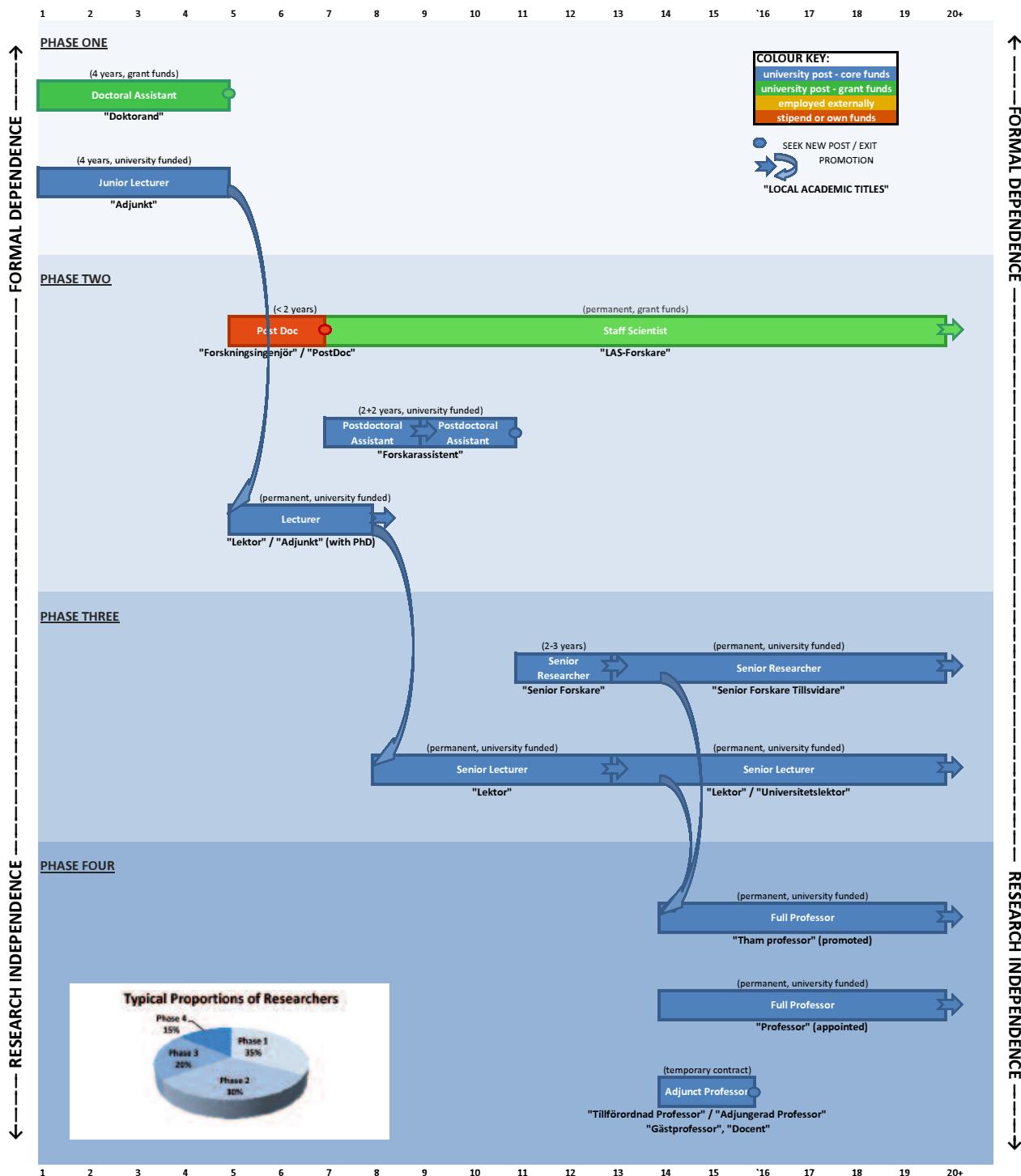
CAREER PATHS OF UNIVERSITY RESEARCHERS IN ITALY



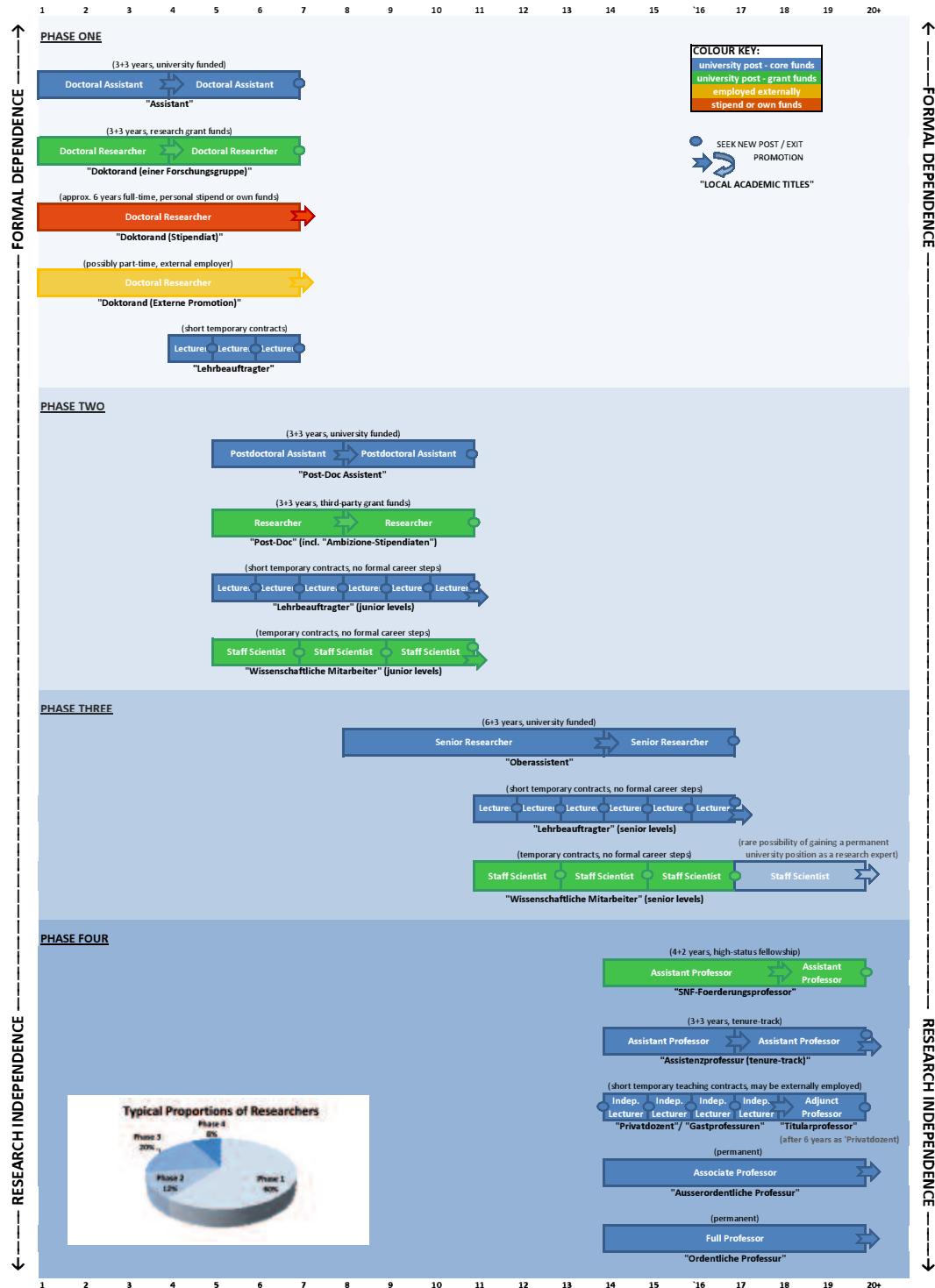
CAREER PATHS OF UNIVERSITY RESEARCHERS IN THE NETHERLANDS



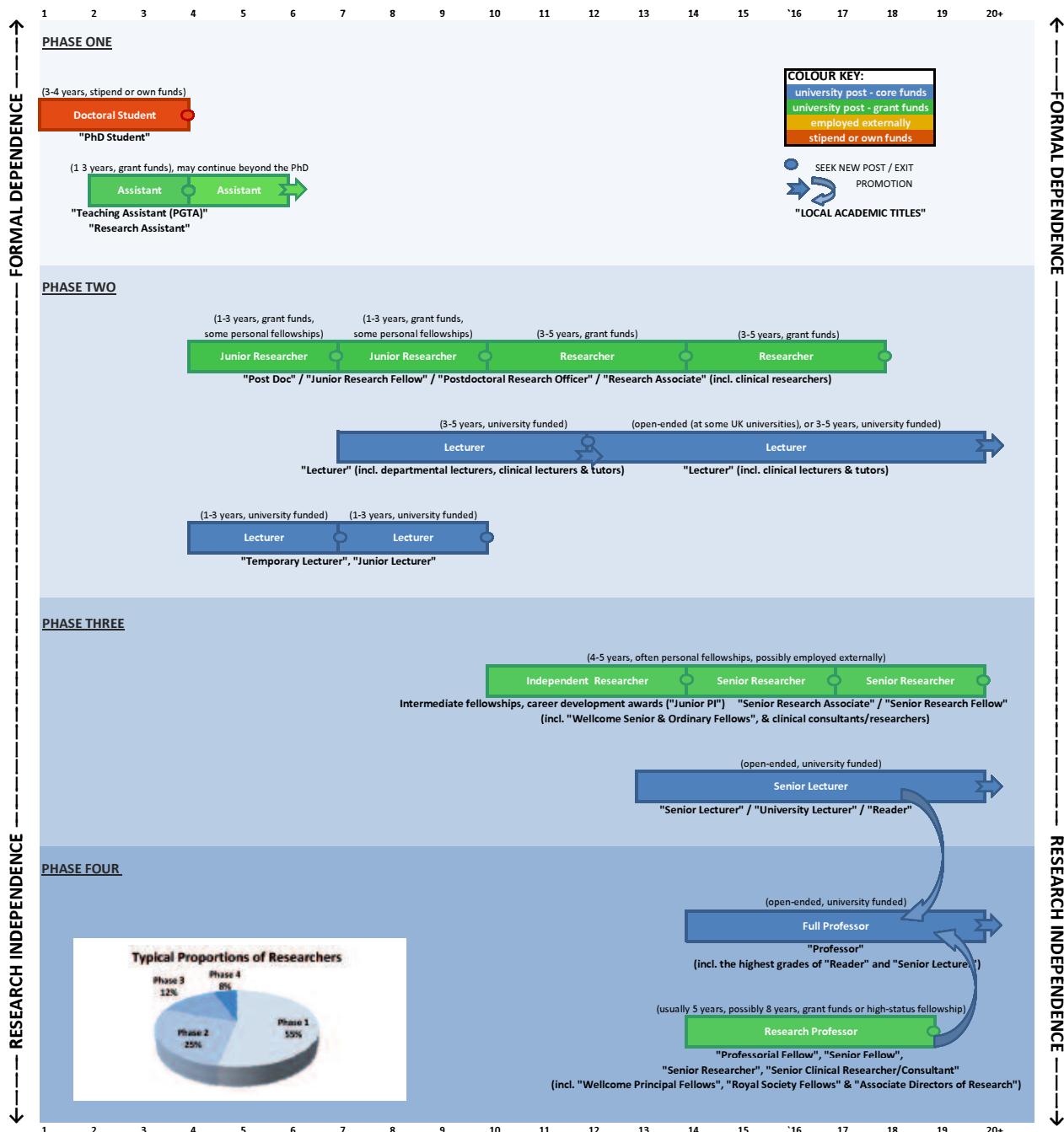
CAREER PATHS OF UNIVERSITY RESEARCHERS IN SWEDEN



CAREER PATHS OF UNIVERSITY RESEARCHERS IN SWITZERLAND



CAREER PATHS OF UNIVERSITY RESEARCHERS IN THE UNITED KINGDOM (ENGLAND)



APPENDIX 2 - LERU MODEL CODE OF PRACTICE FOR RESEARCH EMPLOYMENT

The LERU Model Code of Practice for Research Employment has been developed through a process of extensive consultation with and among LERU members. It has been endorsed by the Rectors' Assembly as a Model Code and represents an aspiration to which LERU universities are working and of which many elements have already been implemented in them. The Model Code reflects a shared commitment among LERU members to provide research staff with excellent working conditions within a stimulating and challenging professional environment.

LERU Model Code of Practice for Research Employment

Our continuing excellence as one of Europe's leading research institutions depends directly on the quality of our research staff. We therefore invest strongly in our researchers and in their work.

This Model Code of Practice for Research Employment has been developed in consultation with our peer institutions in the League of European Research Universities, and in line with the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers⁽¹⁾. It outlines the high international standards we adhere to when employing our researchers⁽²⁾.

Researchers in our university are given the following commitments:

1) Researchers are recognised and valued as employees of the university.

Researchers will:

- Be welcomed as active members of the institution, with an induction process for newly appointed staff to assist in integration into the university's academic life.
- Have a formal work contract issued promptly at the start of employment, with the usual protections of employee status and access to well-designed grievance and complaints procedures if necessary.
- Be treated as a valued member of the university community.
- Have up-to-date information about key contacts, policies, procedures and facilities made easily available and will be kept informed about relevant developments in the university.
- Have voting rights in appropriate academic committees and a right to collective representation on HR issues.
- Have access to university services and support outside your immediate research department.
- Be supported by the university's equality and diversity principles.

2) Jobs will be well-designed.

Researchers will:

- Have jobs designed to further their development as a professional researcher.

- 1) The LERU Model Code of Practice is an international statement of principle defined by universities themselves, which reflects LERU universities' shared commitment to providing their research staff with excellent working conditions within a stimulating and challenging professional environment. It codifies and promotes the existing high HR standards across all LERU universities, expressing these as a direct commitment to their own research employees. The Model LERU Code of Practice has been designed to complement and support the specific requirements of the European Charter for Researchers, the European Code of Conduct for the Recruitment of Researchers, the UK Concordat on Research Career Development, academic labour agreements and HE legislation affecting LERU universities, quality processes such as the Swiss Label Mechanism, and other applicable national and local HR policies. The adoption and publication of the LERU Model Code of Practice forms a key element in LERU universities' implementation of explicit HR strategies and related action plans, which are strongly encouraged by the European Commission and national bodies.
- 2) The LERU Model Code of Practice for Research Employment only applies to researchers who are employed as salaried research staff in our universities. While LERU universities adhere to the general principle that university researchers should usually benefit from employee status and protections, it is appreciated that, in specific national instances, direct employment by the university itself is not always customary, practicable or appropriate. The commitments in the Code therefore do not apply to doctoral students who are not members of staff, nor to researchers on fellowship who may be the employees of their sponsor or who are receiving a non-salary stipend or direct research grant. Other procedures and protections may be applicable for researchers in these cases.

- Hold a recognised post in the university, subject to standard personnel policies and procedures.
- Have a designated advisor (supervisor, line manager, HR advisor, personal mentor, dean or senior academic leader, as appropriate), who is responsible for ensuring that their employment is properly managed.
- Have academic roles and responsibilities that are clearly defined in a formal job description, with commitments and expectations mutually agreed upon.
- Have criteria upon which their work is appraised clearly indicated in advance.
- Have positions that offer specific development opportunities that will support the possibility of advancement either within the university or in employment elsewhere.
- Have their achievements during their time at the university be well-documented, so that they receive appropriate credit for their contributions which can be demonstrated when seeking further employment.

3) Researchers will be appropriately recompensed, according to experience and skills.

Researchers will:

- Receive a regular salary in accordance with university-wide and national requirements, and will be covered by the appropriate national social security and unemployment protections.
- Have their experience, skills, performance and supervisory responsibilities recognised in determining academic status and starting salary range. If responsibilities change, they may request a review of the grading of their role, and, where national legislation permits, are entitled to apply for promotion or salary review at appropriate points in their career.
- Receive assistance in transferring any accumulated pension and other benefits when they change employer.

4) Researchers' work will be well-supported.

Researchers will:

- Have the opportunity at all career stages to define their research requirements, and to seek to fulfil these.
- Be offered regular feedback and ongoing support through staff review and/or mentoring processes.
- Have an advisor to assist in maintaining an appropriate balance between their various duties.
- Receive active support and information to assist in

achieving funding for their research, and may also be granted other research-related benefits, such as sabbatical leave or funds for conference attendance.

- Have support for and recognition of other relevant skills in project management, leadership, collaboration and teaching, alongside research achievements.
- Be provided with high-quality training to undertake the research and other tasks.
- Receive from an advisor up-to-date information about the portfolio of training opportunities, and help in designing a training package to further develop their potential.
- Have meaningful opportunities to offer constructive feedback on the university's provision for researchers.

5) Researchers' careers will be well-supported.

Researchers will:

- Be supported so that their experience in the university contributes positively to their career and professional development.
- Be equipped with the knowledge and skills to navigate the highly competitive international research environment as well as alternative career opportunities in their professional field.
- Have access to individual careers advice throughout their time at the university, and will be offered well-targeted development support appropriate to their career stage.
- Receive adequate notice, support and information about further career possibilities when their contract comes to an end.

These commitments are offered in return for the contribution researchers make to the university. From their side, we expect professional service and high-quality research outputs, a strong commitment to ethical responsibility, high research standards and academic integrity, and an active engagement with the academic life of the university. Researchers are primarily responsible for their own career development, although the university will do its best to ensure that work in the university is professionally enriching and provides a solid foundation for long-term careers. It looks forward to sustaining a productive and stimulating relationship with researchers during their time at the university and beyond.

About LERU

LERU was founded in 2002 as an association of research-intensive universities sharing the values of high-quality teaching in an environment of internationally competitive research. The League is committed to: education through an awareness of the frontiers of human understanding; the creation of new knowledge through basic research, which is the ultimate source of innovation in society; the promotion of research across a broad front, which creates a unique capacity to reconfigure activities in response to new opportunities and problems. The purpose of the League is to advocate these values, to influence policy in Europe and to develop best practice through mutual exchange of experience.

LERU publications

- Developing the European Research Area: Note to the European Commissioner for Research (*December 2009*)
- How research can inform policy (*November 2009*)
- What are universities for? (*September 2008, Geoffrey Boulton and Colin Lucas*)
- The future of the European Research Area (*September 2007*)
- Doctoral studies in Europe: excellence in researcher training (*May 2007*)
- Universities and innovation: the challenge for Europe (*November 2006*)
- Commentary on the purpose, structure and functions of a European Institute of Technology (*May 2006*)
- Competitiveness, research and the concept of a European Institute of Technology (*November 2005*)
- Growth, research-intensive universities and the European Research Council (*March 2005*)
- Unlocking Europe's intellectual potential - universities and a European common market for research (*April 2004*)
- Research-intensive universities as engines for the "Europe of Knowledge" (*May 2003*)
- The European Higher Education and Research Areas and the role of research-intensive universities (*August 2002*)



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