MEICOM

ITNA TRAINING NEEDS ANALYSIS

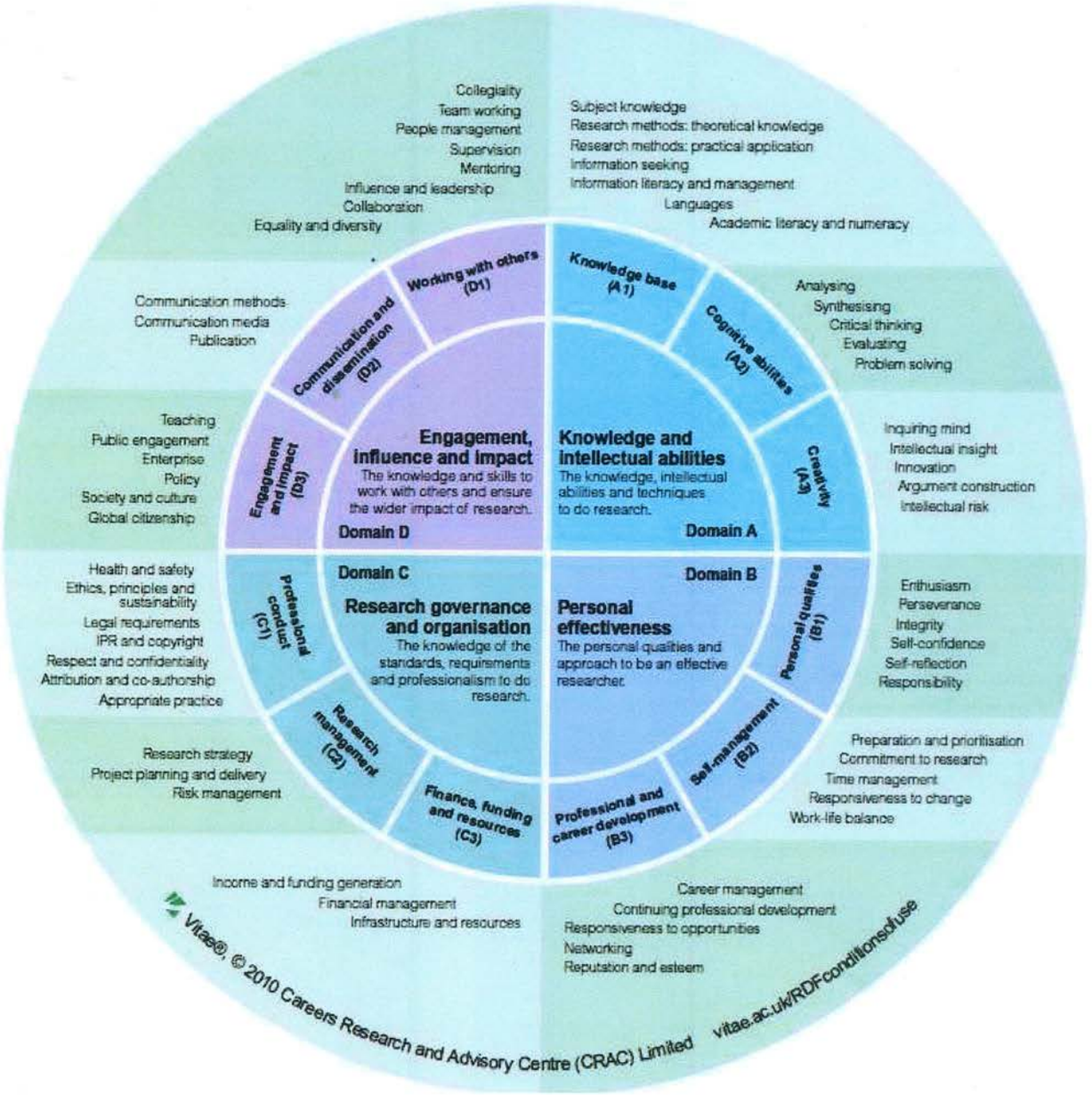
Successful and timely completion of your research degree will depend on developing a mixture of subject-specific skills, intellectual skills, such as critical thinking, and more generic skills, like communication and enterprise. Many of these skills will also be important in your future life, whatever career or life choices you make.

The ITNA Training Needs Analysis form uses Vitae's Researcher Development Framework (RDF) to help you think about your current skills, pinpoint gaps in your knowledge, and identify areas for future development. The RDF articulates the knowledge, behaviours and attitudes of researchers, from postgraduates to establish academic leaders and is endorsed by Research Councils UK.

There are four sections to the form, based on the RDF domains (below or for more details, including suggested skills levels see:

https://www.vitae.ac.uk/vitae-publications/rdf-related/researcher-development-framework-rdf-vitae.pdf/view)

Use the sections to outline your goals for this year in each area. At the end of the form is a summary sheet to outline your specific plans.


Collegiality
Team working
People management
Supervision
Mentoring
Influence and leadership
Collaboration
Equality and diversity
Subject knowledge
Research methods: theoretical knowledge
Research methods: practical application
Information seeking
Information literacy and management
Languages
Academic literacy and numeracy
Working with others (D1)
Knowledge base (A1)
Communication methods
Communication media
Publication
Communication and dissemination (D2)
Cognitive abilities (A2)
Analysing
Synthesising
Critical thinking
Evaluating
Problem solving
Teaching
Public engagement
Enterprise
Policy
Society and culture
Global citizenship
Engagement and impact (D3)
Engagement, influence and impact
The knowledge and skills to work with others and ensure the wider impact of research.
Domain D
Knowledge and intellectual abilities
The knowledge, intellectual abilities and techniques to do research.
Domain A
Creativity (A3)
Inquiring mind
Intellectual insight
Innovation
Argument construction
Intellectual risk
Health and safety
Ethics, principles and sustainability
Legal requirements
IPR and copyright
Respect and confidentiality
Attribution and co-authorship
Appropriate practice
Professional conduct (C1)
Domain C
Research governance and organisation
The knowledge of the standards, requirements and professionalism to do research.
Domain B
Personal effectiveness
The personal qualities and approach to be an effective researcher.
Personal qualities (B1)
Enthusiasm
Perseverance
Integrity
Self-confidence
Self-reflection
Responsibility
Research strategy
Project planning and delivery
Risk management
Research management (C2)
Finance, funding and resources (C3)
Professional and career development (B3)
Self-management (B2)
Preparation and prioritisation
Commitment to research
Time management
Responsiveness to change
Work-life balance
Income and funding generation
Financial management
Infrastructure and resources
Career management
Continuing professional development
Responsiveness to opportunities
Networking
Reputation and esteem
Vitae®, © 2010 Careers Research and Advisory Centre (CRAC) Limited
vitae.ac.uk/RDFconditionsofuse

Domain A: Knowledge and Intellectual Abilities

The knowledge, intellectual abilities, and techniques used in research (Knowledge Base, Cognitive Abilities, Creativity)

- I would like to expand my knowledge concerning relevant techniques that might be useful during the later phases of the projects, in order to prepare better aspects of experimental design and accurate planning of timeframes. I would like to learn techniques including Southern blotting, NGS data analysis, immunostaining and cytology, which are likely to be performed during the second and third year of my Ph.D. Preparing for this will allow more rapid progress of the experiments. I also intend to search for for other novel techniques that might complement my study.
- Study related fields of science in order to put my research in a broader scientific context.
- Explore bioinformatics tools used in the study of recombination in plants, animals and fungi..
- Learn about advanced statistical methods for testing and validating data.
- Expand current projects according to their progress.
- Embed my expected results more deeply into the wider context of current world problems, focusing on food sustainability and legislation of breeding and transgenesis.

Domain B: Personal Effectiveness

The personal qualities and approach to be an effective researcher (Professional and Career Development, Self-Management, Personal Qualities)

- Develop more resilience to unexpected difficulties.
- Seek expertise and ideas from other experienced researchers, more widely connected to my own field.
- Manage my time on a short scale more effectively.
- Plan my future career and engage in networks that might help in my career development.
- Participate in soft skill courses, preparing me for the post-doctoral research environment.

Domain C: Research Governance and Organization

The knowledge of standards, requirements, and professionalism to do research (Professional Conduct, Research Management, Finance, Funding and Resources)

- Prioritise the projects that require longer times to conduct, including genetic experiments.
- Expand my knowledge concerning safety procedures of experiments yet to be conducted and to be able to respond effectively in the case of an emergency.
- Learn about legislation connected to my field, including European GMO regulations, in order to relate them to my projects.
- Manage my intermediate designs/data/results in a more accessible way, to improve the communication of my findings to other scientists.
- Explore possible funding sources for my future research and adjust my current research to fulfill the requirements of these fundings.
- Understand the changes in a post-Brexit European funding environment.

Domain D: Engagement, influence and impact

The knowledge and skills to work with others and ensure the wider impact of research (Working with Others, Communication and Dissemination, Engagement and Impact)

- Engage in collaborative projects and share experience to mutual benefit.
- Participate in outreach opportunities in the UK and abroad, focused on people not directly connected to the research community and school students, explaining the principles and importance of my plant genetics projects, and science in general.
- Expand the network of scientists from my field that I am in contact with.
- Become involved in social media news exchange between scientists and non-scientists.
- Participate in undergraduate teaching.
- Engage in public dialogue about misunderstood scientific topics.
- Understand current political changes to evaluate potential opportunities and dangers in regard to scientific development.

You can use this section to identify a small number of specific prioritised goals for your development year.
This should be revisited at the end of the year to assess progress.

Identified skill area for development	Planned Activity	Success criteria (i.e. how will you know you've achieved your goal)	Deadline (when do you want to achieve it by?)
A. Theoretical knowledge about planned to use techniques	Learn from available literature and follow others conducting these experiments if possible	Being able to explain and comduct the experiment without a danger of making a mistake that would set the project back	2 months before the experiments using these techniques will be performed
A. Bioinformatical experience	Learn from books about languages R and Python, focusing on biological applicances.	Understanding algorithms and programs used currently in bioinformatics and developing my own software.	November 2019
B. Overall soft skills	Participate in courses	Finishing the courses with a good understanding of the topics	June 2019
C. Projects prioritisation	Evaluate the time needed to finish every project and prioritise the longest ones	Being sure that all the projects can be finished within the planned schedule	As soon as possible, and repeat this evaluation periodically
D. Outreach involvement	Look for and participate in at least one outreach project organised in Cambridge or elsewhere	Participated in an outreach project	November 2019

Signature (MEICOM ESR)

Dmitrii Litvinov ..... Date 29/1/2019

Signature (Supervisor)

..... Date 29/1/19

Signature (Second or co-Supervisor)

..... Date 29/1/19