

Titles published in the researcher booklet series:

1. **The balanced researcher**
2. **The creative researcher**
3. **The engaging researcher**
4. **The leading researcher**
5. **The informed researcher**
6. **The career-wise researcher**
7. **The enterprising researcher**

www.vitae.ac.uk/researcherbooklets



The enterprising researcher



Create, recognise and seize opportunities



About Vitae

Vitae champions the personal, professional and career development of doctoral researchers and research staff in higher education institutions and research institutes. Vitae's vision is for world class personal, professional and career development of researchers.

About Enterprise Educators

Enterprise Educators UK is a national network which brings together over 800 enterprise and entrepreneurship educators and practitioners from 100 UK Higher and Further Education Institutions.

Authors (in alphabetical order)

Anne Goodman	Vitae Hub Manager, South West and Wales
Alison Mitchell	Director of Development, Vitae
Heather Pateman	Programme Manager, Vitae
Sara Shinton	Managing Director, Shinton Consulting
Tennie Videler	Networks Manager: Researchers, Vitae
Janet Wilkinson	Lead Consultant at Three Times Three Consulting

Follow us on [Twitter](#) at @Vitae_news

Find us on [Facebook](#) at www.facebook.com/vitae.fanpage

Connect with us on [LinkedIn](#)



Vitae c/o CRAC, 2nd Floor, Sheraton House, Castle Park, Cambridge CB3 0AX
T: 01223 448500 orders@vitae.ac.uk
F: 01223 311708 www.vitae.ac.uk

Anne Goodman, Alison Mitchell, Heather Pateman, Sara Shinton,
Tennie Videler and Janet Wilkinson

www.vitae.ac.uk/researcherbooklets

Contents

page

What do we mean by 'being enterprising'?	2
How enterprising are you?	6
Understanding your enterprising potential	8
Starting with self-knowledge	10
The three pillars of enterprise: passion, enthusiasm and confidence	11
Being prepared for opportunities	14
Generating ideas	16
Putting your ideas into action	18
Working with other people	19
Understanding finance and funding	20
Stretch yourself and learn how to manage risk	22
Communication	24
Keeping going and dealing with challenges	25
Making an impact	26
Top tips for being an enterprising researcher	27

'The enterprising researcher' is published by the Careers Research and Advisory Centre (CRAC).

Vitae is led and managed by CRAC: The Career Development Organisation and supported by Research Councils UK (RCUK) and UK HE funding bodies



Vitae is led and managed by CRAC: The Career Development Organisation, supported by Research Councils UK (RCUK), and UK HE funding bodies, and delivered in partnership with regional Hub host universities

Material from this document may be reproduced by UK higher education institutions for non-commercial purposes, provided that the following acknowledgment is used: 'The enterprising researcher', Vitae 2014. If material is required for use outside the UK higher education sector, or for commercial use, please contact Vitae in the first instance.

Any opinions expressed are those of the writers and do not necessarily reflect those of Vitae. The content of external resources and websites referenced is not the responsibility of Vitae.

ISBN: 978-1-906774-39-4

Vitae, © 2014 Careers Research and Advisory Centre (CRAC) Limited

What do we mean by 'being enterprising'?

The research environment offers many opportunities for enterprising individuals. As a researcher you have probably already developed relevant knowledge and skills.

For the purposes of this booklet, enterprise is defined as 'a set of capabilities and attitudes that can enable a culture of innovation, creativity, risk taking and opportunism that underpins employability, enables entrepreneurship and intrapreneurship, and facilitates knowledge transfer'¹.

The aim of this booklet is to give you the chance to:

- identify and reflect on your current enterprising ideas
- think about how to use your enterprising capabilities creatively for your own benefit and that of others
- identify opportunities worth pursuing
- gain inspiration from the experience of other enterprising researchers from a variety of disciplines, backgrounds and career stages
- explore ways in which you might develop your confidence, energy and ideas
- engage in activities to build and develop your enterprising capabilities
- recognise your enterprising potential and have ideas about how to move forward.

You might be contemplating how you can build a business from your research or using your researcher capabilities, or perhaps you have never contemplated this. Whatever stage you are at, this booklet will help you analyse and develop your enterprising capabilities through case studies, self-reflection and practical activities.

“The act of undertaking a doctorate is a good training ground for the development of enterprise. Research by its nature requires creativity, determination and problem solving. These skills are likely to be useful wherever a researcher's career journey takes them.”

Dr Max Robinson

What are the qualities associated with being an enterprising researcher?

To be an enterprising researcher:

- requires capabilities such as innovation, creativity, problem solving, communication, perseverance, project management, dealing with uncertainty, practical action and making the most of opportunities – capabilities applied in research
- demands a particular way of working within organisations including universities; an attitude and approach much valued by employers known as intrapreneurship
- requires business flair and a creative approach to setting up a new business venture, defined as entrepreneurship
- necessitates evidence of success in creating impact and knowledge exchange in the work environment.

Some definitions: entrepreneurship, intrapreneurship and social enterprise – what's the difference?

Entrepreneurship is generally defined as the process of creating a new business such as spin-out, start-up or new company ventures.

Vitae case studies of 40 doctoral entrepreneurs² from different disciplines show that entrepreneurial researchers create businesses directly from university or at some time after their doctorate, and not necessarily using their research. It is their enterprising capability as a researcher that counts. You may not be inclined now but you never know what opportunities the future will bring!



Research requires creativity, determination and problem solving

¹ Definition used at the Enterprise Capabilities Workshop, April 2007 arranged by CRAC in conjunction with the UK GRAD Programme (now Vitae), RCUK and EPSRC

² 'What do researchers do? Career profiles of doctoral entrepreneurs', Vitae 2010

What do we mean by 'being enterprising'?

Intrapreneurship requires a similar set of skills but takes place within an organisation.

“ **Intrapreneurs transform an idea into something which adds value for the organisation.** ”

Many academics are intrapreneurial and universities offer a productive environment to explore a range of enterprising skills. There is more information at www.vitae.ac.uk/intrapreneurship

Social enterprise requires a similar set of capabilities but differs in that it has a primarily social objective; any financial surpluses are principally reinvested for a social purpose in the business or community.³

Wherever you are or whatever your plans, being enterprising requires a certain attitude and approach to your work and life, making full use of your existing entrepreneurial capabilities and building on them further.

As a researcher there are many benefits to adopting this approach:

- an enterprising attitude and enterprising capabilities will help you in your research, promoting creativity, innovation and business flair
- an enterprising approach will benefit any future career in research, teaching, professional services in universities, or in business, industry and the public sector; it will underpin your employability whatever your career pathway, displaying your unique creativity, making a difference to your workplace and marking you out from the crowd.

Enterprise in the Vitae Researcher Development Framework (RDF)

The Vitae Researcher Development Framework (RDF) is a comprehensive approach to enhancing the careers of researchers. Primarily, the RDF is designed for you as a researcher to evaluate and plan your own personal, professional and career development at any stage in your career. It was developed by and for researchers, in consultation with the academic community and employers, and articulates the knowledge, behaviours and attributes of successful researchers with a view to enabling researchers to achieve higher levels of professional excellence.⁴

Throughout this booklet, the capabilities associated with enterprise are viewed through the Enterprise lens on the Vitae RDF. This highlights the key knowledge, behaviours and attributes typically developed and used by enterprising researchers.⁵

“ **Personally I found that without the opportunity of innovation, I would not have chosen to pursue a research degree.** ”

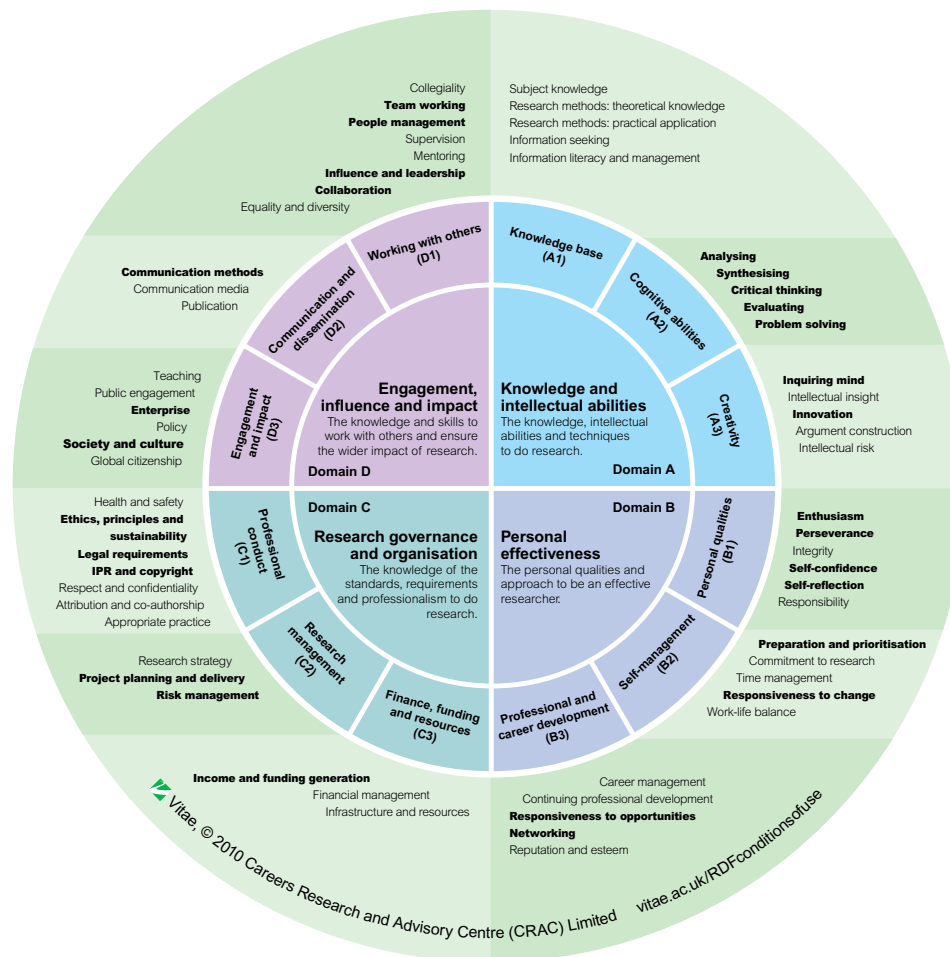
An Intrapreneurial lens on doctoral researchers' views of innovation', Alison Mitchell and Jo Cordy⁶

Find out more about the wide range of career pathways of doctoral graduates in the series 'What do researchers do?'



www.vitae.ac.uk/wdrd

The enterprise lens provides an overview of the key knowledge, behaviours and attributes typically developed by researchers that can be acquired through, or used in, enterprise activities.



Text in bold signifies all capabilities developed and used by enterprising researchers.

³ For more information see www.vitae.ac.uk/socialenterprise

⁴ See www.vitae.ac.uk/researchers/429351/Introducing-the-Researcher-Development-Framework.html

⁵ For the full lens with statements go to www.vitae.ac.uk/researchers/1272-474341/Enterprise-lens-on-the-Researcher-Development-Framework.html

⁶ www.vitae.ac.uk/CMS/files/upload/2.Vitae_intrapreneurship_project_paper_PRES%20survey.pdf

How enterprising are you?

A self-perception inventory

This self-perception inventory provides an opportunity to reflect on the enterprising capabilities you already have. Read the following statements from the Enterprise lens on the Vitae Researcher Development Framework (RDF) and decide to what extent they apply to you. Assess yourself on a scale of 1-5 where 5 is highly developed and 1 requires development. The reference codes beside each statement (e.g. A2) refer to the descriptors associated with the Enterprise lens on the RDF as shown in the RDF diagram on the previous page.

- | | |
|--------------------------------------------------------------------------------------------------------------|--------|
| 1. I'm an original, independent and critical thinker. | A2 |
| On a scale of 1-5 I am... | |
| 1 | 5 |
| 2. I recognise research questions and I formulate and apply solutions to a range of research investigations. | A2 |
| 1 | 5 |
| 3. I get ideas and information from a diverse range of sources. | A3 |
| 1 | 5 |
| 4. I approach my work with enthusiasm, passion and confidence. | B1 |
| 1 | 5 |
| 5. I persevere when I meet challenges. | B1 |
| 1 | 5 |
| 6. I spend time looking at trends & directions in my research and the wider environment. | B2 |
| 1 | 5 |
| 7. I respond well to a changing environment. | B2 |
| 1 | 5 |
| 8. I find opportunities to work collaboratively with others. | B3, D1 |
| 1 | 5 |
| 9. I've got a wide network within my research area. | B3, D1 |
| 1 | 5 |
| 10. I've got a wide work-related network outside my research area. | B3, D3 |
| 1 | 5 |
| 11. I take responsibility for developing new capabilities and experiences relevant to my work. | B3, D1 |
| 1 | 5 |

- | | |
|------------------------------------------------------------------------------------------------------------------------|----------------|
| 12. I manage risks in my research and protect IPR where appropriate. | C1, C2 |
| 1 | 5 |
| 13. I'm good at identifying and pursuing potential funding. | C3, D3 |
| 1 | 5 |
| 14. I can see where future changes in funding streams are likely to come from. | C3, D3 |
| 1 | 5 |
| 15. I'm a good self-manager; good at managing projects and my time. | B2, C2 |
| 1 | 5 |
| 16. I'm good at taking my ideas and implementing them, working with others where I need to | B2, B3, C2, D1 |
| 1 | 5 |
| 17. I can motivate myself, even when challenged. | B1 |
| 1 | 5 |
| 18. I can find the right people to help me when I encounter problems. | B3, D1 |
| 1 | 5 |
| 19. I communicate my research to a variety of different audiences (in academia and elsewhere.) | D2 |
| 1 | 5 |
| 20. I've built relationships in academic and other contexts to broaden my experience and understanding of other areas. | B3, D1, D3 |
| 1 | 5 |

Conclusion referring your score:

If your average self-evaluation score is more than 3, then you already have good abilities and skillset to become an enterprising researcher.

Otherwise, have a look at which areas you need to develop.

Understanding your enterprising potential

Being an enterprising researcher starts with you understanding yourself. The self-assessment inventory is a useful starting point for getting to know yourself by reflecting on what you do now and how you do it. It is worth spending some time observing yourself through the enterprise lens on the RDF as it can reveal your enterprising capabilities, some of which you may not be aware of.

According to the The Quality Assurance Agency for Higher Education (QAA) which safeguards quality and standards in UK higher education institutions:

“Individuals successful in enterprise or entrepreneurship often have heightened levels of self-awareness developed through reflecting upon, and continually learning from, their actions.”⁷

Developing enterprising awareness

The higher education environment embraces enterprise – indeed it is a key element of the mission statement for some universities. Changes in university funding and public interest in gaining benefits from research encourage a greater focus in universities on the impact of research for economic and societal benefit as well as commercial opportunities. Researchers have to be enterprising to secure resources for their research and to find ways to achieve research impact.

“Postgraduate research students and early researchers are well placed within the university environment surrounded by a web of knowledge, experience and social/professional networks through which to reconfigure ideas and recognise novel opportunities to benefit the university and themselves.”

Intrapreneurship; enabling postgraduate researchers to drive organisational innovation, Alison Mitchell

The Research Councils UK:

“Encourage applicants (for research grants) to explore, from the outset, who could potentially benefit from their work in the longer term, and consider what could be done to increase the chances of their research reaching those beneficiaries. The primary criterion for RCUK funding remains excellent research.”⁸

Due to shifts in employment patterns a range of potential career scenarios exists for researchers outside of research. This includes opportunities to have a portfolio career and starting your own business. Developing your capabilities as an enterprising researcher can help your career wherever it takes you. Increasingly employers are looking for enterprising employees who understand and can add value to their business.

Practise an enterprising mindset

In order to recognise an opportunity that is worth pursuing, you need to practise an enterprising mindset. Whether you pursue an idea that is evident in the market place or further research that leads to ideas of how to disrupt markets, as a researcher you have to decide which ideas are worth pursuing, when and how to pursue them. Is it when there is a watertight business case or when the ideas are exciting and interesting?

Decision-making is important and so is the ability to persevere in challenging environments and build high quality networks with experts and practitioners in their field in order to achieve desired objectives and goals. It requires the use of social capabilities to build trust, relationships and networks and to communicate ideas and information.

All of these elements are covered in this booklet, and you are encouraged to think about the knowledge, behaviours and attitudes you use to pursue your research.

Developing enterprising capabilities

Your potential to be enterprising will grow with practice. Constantly work at developing your mindset further by challenging your thought processes and actions. Here are some activities to help; practise them regularly to develop your capabilities further.

- Establish where you are now, reflect on your experiences, appreciate your current capabilities and plan how these can be applied or extended.
- Decide on one enterprising action that will make a difference to your research or anything else related to your research, and do it now!
- Talk to someone that you have not spoken to before who might be able to help, plan a new network of contacts outside your research group or university, think about extra resources and

support no matter how big or small that would make a difference and plan how you might get them. That is enterprising!

- Look at the case studies in this booklet and be inspired by enterprising researchers.

Use the enterprise lens on the Vitae RDF to realise your enterprising potential

In the RDF diagram (look at page 5) you can see the descriptors that make up the enterprise lens highlighting the key capabilities that describe 'being enterprising'. As you work through this next section, you will look at these descriptors and your capabilities in more detail.



Practice your enterprising mindset

⁷ The 'QAA Enterprise and entrepreneurship education, Guidance for UK higher education providers' www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/enterprise-guidance.pdf

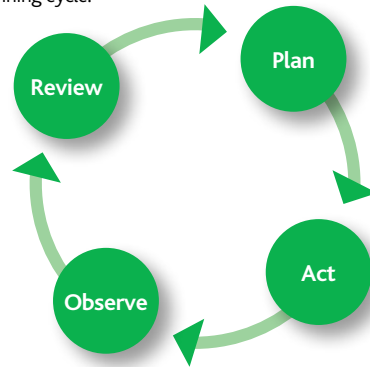
⁸ www.rcuk.ac.uk/kei/impacts/Pages/home.aspx

Starting with self-knowledge

Are you self-directed, with ambition to succeed, pursuing not only research but also career and broader life goals? There are stories of enterprising researchers throughout this booklet. Use these to think about opportunities for yourself.

Increasing your awareness of your enterprising capabilities

Schedule in some self-reflection time each month to take note of when you and others have been enterprising; refer to the planning cycle:



Plan

Think carefully about how you and others have performed similar tasks and use this to develop, change, adapt, action and plan how you can be more enterprising in future. Practice good time management and self-organising skills.

Act

Apply your plan. Maintain your self-awareness. Be creative and adapt as you go along, whilst keeping your plan in mind. Keep a positive attitude, be proactive and do not be afraid to change direction when things don't quite work out.

Observe

- Review what has happened, including the effect on others and on yourself. What worked well? What would you do differently next time?

Reflect/review

- Reflect upon, evaluate and analyse your enterprising actions, the strengths and weaknesses of your actions; identify opportunities, problems and issues for investigation, develop your insight.

Plan again

- Reflection is a cycle: apply what you learn, then continue to reflect and develop further. With each reflection, your enterprising awareness will grow.

Using the enterprise lens on the Vitae RDF

An enterprising researcher is self reflective, seeks ways to improve performance and strives for research excellence. (B1)

When do you use these capabilities in your research and elsewhere?

The three pillars of enterprise: passion, enthusiasm, and confidence

Passion

Being passionate about your research can be crucial to your success. It can be the basis of your own motivation when things become difficult, but it can be also the key to securing the commitment and support of others.

Start by considering why your research is important and interesting to you. If you understand your own feelings, it is much easier to convince others that your work has value and that you are making an interesting and useful contribution towards your research field.

Identify the elements of your research which give you the basis for passionate conversations and presentations. Make some notes here about how you usually describe your work if you are asked what you do or how things are going. More importantly consider how you would describe your research to a member of the public, someone you have just met who is not a researcher and knows nothing about your research, and yet might benefit from your work. What would you tell them? How would you make them interested in your work?⁹

What is interesting about your research? Why were you drawn to it? What have been the best moments so far? What exciting possibilities are ahead?

Extend your thoughts to your wider passions – what do you really care about or value? Is there a subject or area of research which you are really passionate about?

⁹ You will find more specific advice in the Engaging Researcher booklet www.vitae.ac.uk/researcherbooklets

Enthusiasm

Being enthusiastic is fundamental to being enterprising. Sometimes our enthusiasm needs a boost. If you feel your enthusiasm levels could do with a boost, try the following:

Five steps to an enthusiastic you!

- 1 Use active, positive vocabulary.
- 2 Talk about things you enjoy about your work.
- 3 Try to engage with people at times of the day when you feel more energetic.
- 4 Talk about your successes and achievements.
- 5 Say positive things to others about their work and what they talk to you about.

Being more energetic will make you appear (and feel) more enthusiastic.

Reflect on: when and how you are most effective, and when and where you feel drained. Play to your strengths – working in a way which suits you will preserve your energy.

Accentuate the positive

Focus on achievement – even on tough days, identify the steps you have taken with your research. Develop a robust project plan that you can use to monitor progress.

Start to make links between the work that you do and the difference that this is making. Celebrate every success no matter how small.

Check your work/life balance

To help you remain fresh and enthusiastic about your work try some of the strategies from **The Balanced Researcher** booklet.¹⁰ Take a look and try out something new.

Spend time with radiators not drains!

Spend time with enthusiastic people (radiators) who make you feel comfortable about yourself and make it easy to express a positive mood. Avoid negative people (drains) as they may infect you with unnecessary doom and gloom.

Lift your head above the parapet

Read broadly around your subject, make new connections, attend seminars in other departments and be stimulated by academic life.

“Nothing great was ever achieved without enthusiasm.”

Ralph Waldo Emerson



¹⁰ www.vitae.ac.uk/researcherbooklets

Confidence

Having confidence and belief in yourself and your abilities is key to being enterprising. If you believe in yourself, others will too. Nothing succeeds like success – a cliché, but like most clichés, it has some truth in it. Belief in your abilities to perform an activity comes through successful experiences. Acknowledging your success, great or small, will generate a general sense of self-confidence. Celebrate your successes and do not dwell on your failures. That is enterprising!

Read about Chelsea Brain's experience; what can you learn from it?

Chelsea Brain is a doctoral researcher in engineering at Newcastle University.

"In 2011 I was in the winning team in the University's enterprise competition, ACTION 2011. Our enterprise was an enzyme cleaning technology and the judges were particularly impressed by the development of an industrial partnership with Heineken, which we set up during the 9 months of the competition.

We identified Heineken as an ideal partner early on and approached their Sustainable Development Manager, explaining the technology, the financial savings it could have for the company and conveying our excitement in its potential. He was interested enough to come and visit us and the partnership grew from there.

From the beginning of the competition we were all very excited about the technology – it's a fantastic application of science and offers a far more sustainable alternative to current approaches. Our enthusiasm was a reflection of our confidence in the science and our commitment to the venture, which made it much easier to convince others to engage.

My enthusiasm was buoyed up by the others in the team – because we were all so excited about the potential, we had a very positive outlook and kept each other working hard. As part of the competition we had access to a mentor and we found someone who was equally positive. Being around people like this gave us permission to be passionate. You shouldn't underestimate the impact other people can have on your own energy and drive."

Using the enterprise lens on the Vitae RDF

An enterprising researcher approaches research with enthusiasm, passion and confidence. (B1)

An enterprising researcher maintains and develops relevant skills set and experience in preparation for a wide range of opportunities within and outside academia. (B3)

When do you demonstrate passion, enthusiasm and confidence?

“If you always do what you've always done, you always get what you've always got”

Anthony Robbins

Being more open to opportunities will increase your overall impact. Professor Paul Gough is Deputy Vice-Chancellor at the University of West England, Bristol and he regularly talks about opportunities in terms of seeds, shoots and fruit.

Seeds – you should plant lots of seeds in different locations with different people; ideas, plans and contributions. Given the right support and conditions some of these seeds will grow into...

Shoots – these are the opportunities that grow from the seeds that you need to nurture, put time and effort into growing and find good conditions to grow into strong plants and trees so that, in time, they will provide...

Fruit – the harvest from your work of planting seeds and growing them through the initial stages into strong ideas, plans and projects. Whilst enjoying the fruit continually plant more seeds and support the shoots that grow from them.

Challenge yourself – walk towards change and opportunity

It is easy to fall into a rut: have the same breakfast every day, pick up a coffee from the same shop, have lunch with the same people. Challenge yourself to shake things up and seek out new and different situations in small ways:

- step out of your normal circles, and talk to different people
- network in person or virtually in different places
- read a different newspaper, or journal.

Exposure to a range of new and diverse stimuli can refresh you and, in enterprising terms, lead to new ideas and insights.

Horizon scanning

An enterprising researcher is always on the lookout for opportunities and seizes them eagerly. Keep your eyes open, and your ears to the ground for any chances to explore how enterprising you are.

Have a go!

In a university there are plenty enterprising opportunities and people; you have to be enterprising to find them. Here are some suggestions:

- Find an enterprise champion in your network or institution. You may need to go to meetings, ask questions and do some research to spot them. Get in touch, talk to them and 'plant some seeds' to demonstrate your interests.
- If you are interested in consultancy or commercialisation of your research, find out who is responsible for that in your university. Many universities have professional staff with expertise in knowledge exchange activities, business start-ups and intellectual property. Seek these people out and set up a meeting with them.
- Volunteer for committees. Get yourself into a room with different people and grow some ideas.
- Start something new to benefit you and other researchers.
- Talk about your ideas and encourage others to spread the word.
- Think about who is interested in your idea. How would they benefit?
- Relate your ideas to the research process.
- Understand the field you are interested in, work out the gap and address the gap.

Elena Golovushkina is a doctoral researcher at Glasgow Caledonian, researching the employability of doctoral candidates in social sciences.

"Really for me it all started at undergraduate level in Russia when I got engaged in things that interested me. I was the course representative for my Masters programme at The University of Edinburgh and since moving to Glasgow Caledonian University, I have become more involved in the Graduate School. In my first year I was the research student representative for doctoral candidates and, in addition to other responsibilities I am a member of the student parliament at the University. I've taken lots of opportunities to be involved in things developed by the Graduate School including creating a training session on cultural awareness and have extended my interests to a European level, where I am a board member of Eurodoc (The European Council of Doctoral Candidates and Junior Researchers).

I'm really keen to be involved in activities that are outside my doctorate but that support the work I'm doing. I have been involved in local collaborations with Strathclyde University, developing a training course on social media for researchers and I support the administration of the Scottish Researcher Career Coordination Forum; this has helped me to get to know senior stakeholders who influence the development of researchers across a number of institutions. I'm not a big fan of networking for networking's sake but I have a genuine interest in people; it is really important to your research to be able to make connections and understand how it all works together."

A researcher who has organised a small science festival, connected opportunity spotting and preparedness to great effect:

"I was interested in running a public engagement event and was in the same room at a conference as a public engagement champion. Although we don't work together I'd met him once before and took the opportunity to say hello to him and tell him about the event and the benefits of his institution being involved. I was delighted when he offered to part-fund the work I was doing and couldn't wait to tweet the result and his institution's involvement!"



Challenge yourself.
Look outside the box.

Dr Rachel Clark is a Project Manager working in the Knowledge Exchange Hub within the Strathclyde Institute of Pharmacy and Biomedical Sciences.

She also has a wider university role within Research and Knowledge Exchange Services at the University of Strathclyde. She co-led the Strathclyde Enterprise Academy in 2011, which was subsequently shortlisted for a Times Higher Education Award and has since run it again in 2013. Her current role is Project Manager for Engage with Strathclyde, a week-long series of events, which external organisations are encouraged to attend to increase knowledge exchange activity. Her doctorate is in medicinal chemistry.

“My career journey has been as much about opportunities finding me as much as me seeking them out! My research background has really helped the transition into the knowledge exchange role, as people I’ve worked with know my skills and experience. This gives me a network of people opportunity spotting for me. I see the work I do now as an extension of my research work. I say ‘yes’ far more than I say ‘no’ and have had two major projects to work on in the last six months.

Knowledge exchange and enterprise are new ways of working for many – some see the benefit and want to engage; others need convincing. These different attitudes require different approaches, but as a researcher I had to solve problems and overcome obstacles and I’ve been able to apply the same creativity to these new challenges. I am lucky to be supported by a good team of people around me in all directions; they act as sounding boards and help me, and I keep in contact with people from outside the University. Outside work, running and kettle bells give me the chance to process my thoughts, come up with ideas and keep me going.”

You don’t need to be an ideas machine to be more enterprising. It is about having a source of ideas to solve the problems that you and others you work with come across.

This section is about identifying how you normally come up with ideas. Understanding your current thought processes will give you the opportunity to stretch yourself and look for alternative ways of generating ideas.

What would make all the difference to your idea?

- * If I had
.....
- * I could
.....
- * which might lead to
.....
- * I could achieve
.....
- * if I was prepared to talk about
.....
- * to
.....
- * when I see them at

Taking it further... being more creative

There are lots of ways to improve the number and quality of your ideas, as described in the Vitae Creative Researcher booklet.¹⁰ Identify which ones might work for you.

Where do you have your best ideas?

- Are you inspired in the countryside, at your desk, in the shower or somewhere else?
- Is your creative place... outdoors? Do you need the space and clear head you get when you are out running?
- Is your creative place... in a completely different environment? Do you need holidays and at least two weeks off to give your ideas encouragement to emerge?

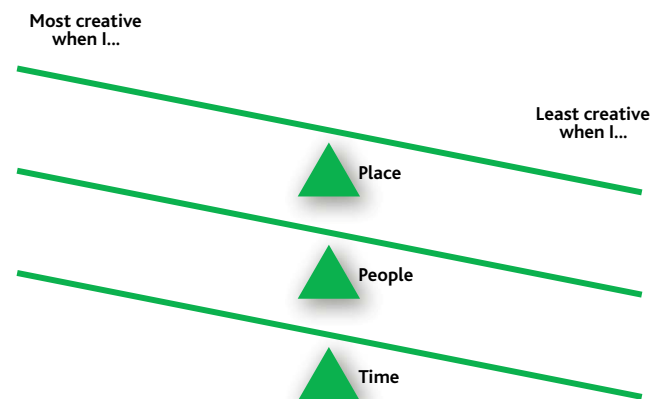
Do people help or hinder?

- Some researchers feel the benefit of having (sometimes specific) people around them to be able to generate ideas and have the collaborative thought process that comes from being in the company of one or more people.
- Others have their biggest and best ideas when they have the opportunity to spend time on their own and make time for reflection. They prefer quieter workspaces and like to develop thoughts ahead of talking them through. What about you? What is your preferred style?

Does a deadline stifle or inspire?

- Some are more creative under pressure; others when they have space and can give themselves time to play with ideas without a deadline.

Reflect on when and where you are at your most creative and seek out these circumstances.



Using the enterprise lens on the Vitae RDF

An enterprising researcher thinks originally, independently and critically. (A2)

An enterprising researcher is open to new sources of ideas. (A3)

Thinking about your own ideas development, how might these translate into enterprising-related behaviour?

¹⁰ www.vitae.ac.uk/researcherbooklets

Putting your ideas into action



The key feature of successful enterprising behaviour is putting ideas into action, not just having dazzling creativity or ideas. If you are willing to try new things, to take the first steps, then you are truly on your enterprising journey. Throughout this publication, the capabilities associated with being enterprising have been described and illustrated to help you to see your enterprising potential and give you ideas to move forwards as an enterprising researcher.

Forming a plan to carry out your enterprising ideas requires the same tools as planning your research or your career. You'll find a range of useful resources on the Vitae website and support in your institution.

Using the enterprise lens on the Vitae RDF

Consider the sub-domain C2 about project management.

Consider your behaviours around how you set goals and plans and manage resources to deliver results. How would this help you achieve your enterprising goals?

Remember that ideas in themselves are not enough. To turn them into actions and you may need to get help from others. Being enterprising might need you to address the question 'who can I ask to help me realise my idea?'

“Enterprise is simply about doing something purposeful with your ideas”

Dave Jarman, Chair Enterprise Educators UK

Working with other people

Being enterprising is rarely a solitary endeavour. In almost every aspect of research, social enterprise or commercialisation, far more can be achieved if you can engage others. The enterprising researcher knows their strengths, plays to them and recognises that they cannot develop all the capabilities and all the expertise needed to deliver their ideas. Think about who is helping you now with your research – make a list – you might be surprised how others contribute to your success.

“We believe that the myth of the lone genius can actually hamper a company's efforts in innovation and creativity.”

Tom Kelley, GM at IDEO (US design/innovation company)

Reflection

Revisit the capabilities audit at the start of the booklet, but this time look at the areas in which you scored less well. Could someone in your existing network help to address these gaps?

My capabilities' gaps

Who could help?

Support from others

Organisations often draw on the expertise of a group of people for support and guidance. In a company this might be a board of directors, in a research project it might be a supervisory group, in an educational project it might be a steering group, in schools it might be a board of governors.

Who could offer you such support? Would it be a group of people, or would you be more comfortable with a mentor? What is the role of your supervisor or principal investigator (PI)? Would you benefit from support from other researchers?

Identify your next enterprising goals

Think about who has the connections, knowledge, experience, power, funds to help you achieve your ideas.

Identify how you will connect with those people.

Take it further... three steps to engaging others

- 1 Brush up your networking capabilities. Your institution may offer training.
- 2 Use the networks of others. Ask your supervisor/PI and other people around you to share their contacts.
- 3 Invest time in going to places in person and virtually, where your future contacts meet and connect.

Using the enterprise Lens on the Vitae RDF

Managing relationships is a mainstay of success in research.

Consider how you:

- build relationships in academic and commercial contexts. (D1)
- actively network for professional and career purposes. (B3)

Understanding finance and funding

Understanding finance and funding is part and parcel of being enterprising. In academia, putting together and managing budgets, costing projects when bidding for research grants, or applying for international funding are all part of the modern academic's workload. Running a successful research group is much like running a small business within a larger organisation. Even if, at this stage, you have no ambitions to run your own company or commercialise your research, developing business awareness, understanding costing, and being able to read a balance sheet are useful skills for most future employment. The researchers in the case studies in this booklet often had to consider how to get funding to realise their ideas.

You can find out more about the range of capabilities of successful researchers in Domain C Research Governance and Organisation in the Vitae Researcher Development Framework.

Your university will also offer support in this area – ranging from a basic introduction to finance and accounting, to more detailed support looking at how to attract venture capital funding.

On a more practical level:

- Look for opportunities to apply for funding – Are grants available to run conferences, or study days? Costing the event and managing the budget would develop your financial awareness.
- Is there a business competition you could enter to develop and practise these capabilities?

Figure 1: Example of costing sheet to estimate funding needs to cover costs

Information	Detail		
Summary Fund Heading	Total Cost	% UK	% Non-UK
Staff			
Travel and Subsistence			
Equipment			
Consumables			
Overheads			
Other costs			
Total			

Funding research

Each funder has different priorities and policies regarding the type of research they will fund and at what level. Funding can come from Research Councils, charities, government departments and industry. To access funding information you could look at specific web sites, ask your research colleagues about their funding and find out who can help you make an application.

Funding commercialisation of research

If you are looking to commercialise your research, it is possible start the journey without funding, by building contacts and using facilities available within your university, but there may come a time when you need funds. There are many sources such as individual companies, the UK Technology Strategy Board, the European Union, specialist companies formed to help spin-out companies and more. Someone in your university will be able to advise you. Find out who that person is and make contact.

Look at one of the Research Council websites and more specifically their calls for funding. Look at the details that they ask for. Figure 1 shows the information that a researcher needs to provide.

Start thinking about how you might get funding to continue your research. What about extending your approach to a company or other sponsor? Who could you start talking to?

Kalyan Bhandari has completed in The Expression of Scottish Nationalism in Tourism at the University of Glasgow.

"Before starting my doctorate research I worked for the Nepalese Tourism Board. I had been interested in conducting research into tourism for some years, but from a social science perspective – something that isn't happening in Nepal, where the research is predominantly done from a business perspective. I realised that the best way to pursue my interests in the long term was to establish a research institute myself.

The steps to achieving this goal have taken me to the other side of the world – I decided to carry out my doctorate in Scotland on Scottish tourism and nationalism because this is a well-established field where I would be exposed to a wide range of ideas, expertise and opportunities. The vibrancy of the field of my doctorate has given me great opportunities to publish and build my academic esteem – something that I knew would be essential if I was to have the credibility to establish the research institute.

Once I had built up my research in Scottish tourism I was able to start publishing on the situation in Nepal. At this point I started to publish under a joint affiliation between the University of Glasgow and the Nepal Centre for Tourism Research. This has helped build the standing of the institute.

I've secured funding from a foundation in Nepal to employ a research associate who is based in Nepal. Funding hasn't been an issue as the nature of our research is very cost effective – at this point we simply needed a room and a computer! Between us we were building the reputation of the centre as a place of reliable and credible research. We published in good journals and I'm now looking at the next stages of the plan – to develop a network for scholars in this field and to bring students over to Nepal to conduct research. My vision has grown and in a few years I'm confident that we will be the most important centre for tourism research in Nepal, a centre for excellence.

I've been able to achieve everything I dreamt of because I've had a clear vision, worked out what needed to change and what needed to happen to achieve this vision. I've had to be very focused and determined. Above all though, I've had a huge amount of moral and emotional support from my supervisor and my school. Their belief and suggestions have helped me to get so far in a short period of time.

My dream of building an environment in which I could do the kind of research I think is important could only be achieved by building a centre from scratch. I didn't have an empire to inherit. If your ambitions are great, a plan and a network are essential!"

Using the enterprise lens on the Vitae RDF

Consider the descriptors from sub-domain C3.

Developing knowledge of the requirement for research income generation and mechanisms for funding (the range of funding sources and the process for making applications.) (C3).

How would you assess your knowledge of this at the moment?

How will you develop that knowledge further?

Stretch yourself and learn how to manage risk

The fear of failure (or less dramatically, the fear of looking a bit silly) can have a stifling effect on being enterprising, and can remove many possibilities for being innovative.

“Ever tried? Ever failed? No matter.
Try again, Fail again. Fail Better.”

Samuel Beckett

This section is about looking for possibilities, trying new approaches and adopting appropriate attitudes. Above all, being enterprising is about recognising and managing risk. It is not about taking unnecessary risks or being reckless.

Think of something you are hesitating to do.

- What is stopping you?
- What is the worst possible outcome?
- How could you plan to manage the worst outcome?

People who don't push the boundaries and don't innovate are often focused on what can go wrong and all the things that are stopping them from changing. When you talk to people who are happy to try new ideas, they rarely focus on the negative. Their attention is on the positive outcome and what they can do to ensure this happens. Of course, it is important to consider risks but not to dwell on them. Enterprising people work out ways to manage or minimise risks and carry on.

Now, imagine a best possible outcome for you. What can you do to maximise the chances of this happening?
Who can help you?

Now, isn't it worth a try?

Shift your focus to the prospect of a positive outcome to see the unlimited potential of doing things a little differently. If you can focus on who and what can help you be successful and if you can communicate the benefits of your proposed actions, you'll feel much more comfortable with risks – possibly to the extent that you see risks as opportunities and challenges requiring enterprising solutions!

Take it further... steps to feel more comfortable with risks

- go to social events or occasions that may be outside your comfort zone
- talk to different people and broaden your social circle
- take on new responsibilities, choosing these to develop the skills, networks or knowledge that will equip you better for the future.

Always remember that risks can be analysed using your research capabilities, and then steps taken to reduce the risks through problem solving. You are probably managing risk already in your research. Doing a literature search is a way of managing the risk of needlessly repeating someone else's work. Being enterprising may be less risky than you thought!



Gareth Morris is a research associate at Salford University with broad interests in social exclusion.

“The traditional academic community meets at conferences and communicates through publications. I am part of a broader community which communicates daily and informally through social media and reacts in seconds to each other's ideas.

Through my twitter feed I learnt about a pop-up café – an ad hoc meeting place – where I met up with some interesting people. I was excited by the possibility of a pop-up seminar – a place where like-minded researchers and practitioners could meet up and learn about each other's work. No agendas, no expectations...and no money! Realising that I was going to struggle to sell this idea through the formal, bureaucratic channels available, I simply jumped in, booked a room and wrote a blog. I then promoted the idea on Twitter, through LinkedIn, a JISC mailing list and Manchester Beacons. Soon I was getting approaches from people, many far away from Salford.

This event has no budget and no agenda, but it has got like-minded people engaged and we are due to meet in a few weeks. Sometimes you can't wait for the right opportunities to come up. This might fail, but the worst that can happen is that there will be a slightly awkward afternoon and a bit of embarrassment. Don't live in fear of things and don't worry about other people's expectations.

I don't think there's anything particularly special about my approach – it is exactly how researchers should behave and it is exactly what is needed to be creative and develop an individual voice.”

Protecting your ideas

If you are considering developing research ideas commercially, you need to seek advice from the experts in your institution as early as possible on how to protect your ideas and intellectual property. Most universities are keen to help you develop ideas with this kind of potential and you should be able to access help and guidance easily. You might need to share the ownership of any ideas resulting from your research with the institution and your supervisor/PI, as they will have provided resources and support to help develop it. Make sure you know your university policy on this.

There are different ways to protect ideas and innovation ranging from patents, trademarks and copyright to simply keeping key commercial information confidential. These different approaches are best discussed with an adviser, who can help you to work out which approach best suits your idea and intended market.

If you are thinking of commercialising your research, or thinking about a start-up business, you will need to combine resilience, management of risk and strategic planning. It's just like doing research really.

Using the enterprise lens on the Vitae RDF

Consider the Domain C, which covers research governance and organisation.

Think about the role and part you play in having knowledge of the following areas:

The legal requirements and regulations regarding your area of research and the research environment (C1)

The principles of IPR and copyright issues (C1)

Organisational and professional requirements and environmental impact of research (C1)

Communication

The researchers in the case studies in this booklet have been involved in a variety of enterprising activities, using different capabilities to achieve their goals. Underpinning all of them is one common theme – that of effective communication.

Communication is the engine which will drive your enterprising activities. If you do not disseminate, explain and celebrate your work with others, you'll have to work twice as hard to be half as enterprising.

- Communication**
- leads you to new partners
 - opens up new opportunities
 - gives you the credit for your efforts
 - allows you to access support and help
 - makes things more real
 - brings funding
 - boosts your career

There are many channels of communication available to researchers. As you read the case studies in this booklet you may see new potential in conferences you attend or consider engaging more with social media or colleagues in your university. You might have identified ways to use and build your networks and seen how to exploit your research to greater effect. As an enterprising researcher you need to be constantly aware of how to spread your message one step further and engage one more person.

Think of one new person that this guide has inspired you to connect with.

Think of one new opportunity to communicate your ideas.

Go and share this guide with someone. Explain why you picked it up, what you've learnt and what you're going to do next.

Sophie Kromholz is a doctoral researcher in art history at the University of Glasgow.

"I came to study in the UK from the Netherlands in Autumn 2010 and knew no-one. I've now got my own network, which includes key people in my research field and my university. When I go to conferences I know that there will be a handful of people I know there. I'm involved in a range of activities in my institution, which has given me the chance to meet a lot of senior people.

All this has been achieved through communication – not just talking about my research but listening too, so I understand the different agendas around me. I get my confidence from reminding myself that as a doctoral researcher, I'm part of an institution which believes in me, and that gives me a stamp of approval. Doing research is a huge privilege, which comes with the responsibility of sharing our work and finding an audience for it."

Using the enterprise lens on the Vitae RDF

Consider the descriptors in sub-domain D2.

How do you build your knowledge of the appropriate communication and dissemination mechanisms for different audiences? (D2)

Do you have a good knowledge of organisational and professional requirements and environmental impact of research? (C1)

How effectively do you assess and manage risk? (C2)

Keeping going and dealing with challenges

Resilience and perseverance

Resilience is often defined as having the ability to bounce back from adversity and having the confidence to find your way through a crisis.

The enterprising researcher demonstrates resilience and perseverance, just by being a researcher! These attributes are developed over the course of doctoral studies and beyond – trying to find a few more people to complete surveys and questionnaires, keeping going when experiments fail, working in the archives for long hours just to find that last letter, standing in the rain counting bats, applying for yet another grant, for yet another job. These all demonstrate perseverance and resilience. These capabilities are admired by prospective employers, so remember to give them examples of your resilience and perseverance.

“Research graduates know how to go through the long dark tunnel and come out into the light”

Across the Triple Helix: Innovative companies and Government funded development of demand-led research graduate transferable capabilities in Universities, Alison Mitchell, 7th Triple Helix International Conference, 2009

Five steps to a resilient you

- 1 Look after yourself – feeling well mentally and physically helps us with our actual and perceived resilience.
- 2 Spend time with friends and talk things over with them.
- 3 Have a positive attitude.
- 4 If things go wrong, apply your problem-solving skills.
- 5 Ask for help.

“Do not go where the path may lead. Go instead where there is no path and leave a trail.”

Ralph Waldo Emerson

Identify your resilience sappers

We all have these – either people or activities. Write a list here of yours, so next time you are aware of the impact they have on you, and then take positive action to address them.



Using the enterprise lens on the Vitae RDF

Consider the descriptors in sub-domain B1 relating to perseverance

How do you build and manage your attitude of resilience?

How do you persevere in the face of obstacles? (B1)

Making an impact

Dr Mhairi Towler started an MSc in Animation and Visualisation in September 2011, after doctoral research in molecular and cell biology and eleven years' experience as a research associate.

"I'd been increasing the amount of teaching I was doing alongside my research and felt that there was an opportunity to be able to explain the anatomy of cells to undergraduates using animation, which brought the theory to life.

In 2008 I had the opportunity to work collaboratively with an animator from Duncan Jordanstone College of Art and Design, to create an animated learning tool that explains the internal details of the eukaryotic cell – a cell with a nucleus. We went on to win an Honorary Graduates award for innovative teaching in 2009. I developed the idea further to present in the Dundee University Venture 2011 competition where I won a runners-up prize. It encouraged me to develop and focus on my idea of setting up my own scientific animation company and to be the first in Scotland to do that – providing animation services for scientists, education, public engagement and companies, and add to my skills with an MSc in animation. I launched Vivomotion, the science animation company, in October 2012, and have since been building up the client base, which includes academic scientists and biotech companies.

There have been some big decisions along the way. I'm currently examining lots of different avenues for funding to help me get up and running in my own business, having used savings to fund me through the course and get the business started. I really want to do this and I've had positive feedback that there is a demand for it."

Any enterprising researcher must recognise and be able to articulate the potential impact of their research. Impact statements are a core part of funding bids and need to cover the potential economic and societal impacts of the research, answering questions such as:

- Who might benefit from this research?
- How might they benefit from this research?
- What will be done to ensure that potential beneficiaries have the opportunity to engage with this research?

Can you write an impact statement about your research?

You can update it as you progress in your research. Use it to help communicate to others the value of your research.



Using the enterprise lens on the Vitae RDF

Consider the sub-domain D3 that covers Influence, Engagement and Impact – the capabilities to work with others and ensure the wider impact of research.

What do you know about knowledge transfer?

Are you more confident about being enterprising and entrepreneurial within and beyond academia?

Who could you work with to influence and benefit policy development, society and the economy?

Are you inspired to seek new outlets and promote the application of research in innovative ways? (D3)

Top tips for being a successful enterprising researcher

Top tips for being a successful enterprising researcher

- 1 Start with you, your goals and what you want to achieve. Only with this clarity will you be ready to work with others and gain the support and involvement of others.
- 2 Use your research capabilities as mapped out in the Enterprise lens on the Vitae RDF to explore and develop your ideas in as much depth and breadth as possible.
- 3 Research the people you might want to approach for input, support and development.
- 4 Look at academia and look beyond academia for enterprising ideas. What can be brought into this environment that works well elsewhere? What can be taken from academia and applied to other sectors?
- 5 Consider the impact of your enterprising activity: who will benefit?
- 6 Look for inspiration in a variety of places in and out of university.
- 7 Look for role models and if you can't find them, identify role model behaviours in other people that might inspire your own enterprise development.
- 8 Ask for help. Other people are essential for discussing ideas, introducing new ideas and people or pointing you towards funding.
- 9 Be prepared to learn from mistakes – enterprising people fail but they pick themselves back up and try again – that's what makes them successful.
- 10 Keep your energy going with input from different sources – the books and journals you read, the company you keep, in and out of work.
- 11 Look for case studies and examples of others doing what you want to do and learn from their successes and their failures!
- 12 Enterprise is a stream of behaviours rather than a one-off event. Keep looking ahead to the next challenge.