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The physicist's guide to changing your career

For members already in employment

The physicist's guide series

The physicist's guides are written to assist anyone with a background in physics regardless of what stage they are at in their career – this could be in education or employment.

These guides are unique because the writers have taken into account the skills and abilities that someone with a physics training or background has, so they are specific and relevant to physicists.

We hope that these booklets will be of assistance when you consider your career-development plan.

The IOP wishes you the best of luck in your career. If you require any further information or advice, e-mail **members.careers@iop.org**.

Other careers guides in this series can be found at **www.iop.org/careers**.

With so many careers options in today's job market, deciding on a suitable career has become more complex.

You are likely to make at least three significant career moves in your lifetime.

This guide briefly explains how you can take advantage of new opportunities without diminishing your expertise and value.

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What kind of change are you thinking of?

We talk about changing career. Some of these changes are more dramatic than others, and they include:

- a change in your job role or job function within the same organisation (e.g. from technician to project manager, or from software programmer to salesman);
- a change in organisation, industry or sector (e.g. from public to private, manufacturing to publishing, academia to industry, or commercial to not for profit);
- a move from employment to self-employment;
- a change in occupation (e.g. from software programmer to teacher, or research scientist to venture-capital analyst).

Why are you thinking of a career change?

You may have made your choice of career some time ago. Some of us make career decisions while still in full-time education. We may have based these on the information that we had at that time about ourselves, about jobs and employers, and about opportunities in the job market. You may have been given careers advice at school or obtained some help during your further education. You may have completed aptitude tests, personality profiles or interest questionnaires to identify career options and/or you may have been influenced in your decision making by family, friends or peers.

Many of us feel that career decisions earlier in our lives were poorly made – based on a lack of information about ourselves and our abilities, and poor information about occupations and the job market. You may acknowledge that you took the first job that was offered to you, with little thought about a longer-term career plan. You chose not to choose.

Since you started work you have grown and developed, and become more self-aware. Your priorities in life may have altered as well as your aspirations, interests and values, and your needs from your work. In the early stages of your career, learning and development may have been a priority. Now security, financial stability and work that allows you to spend time with your family may have become more important. Being in a postdoctoral research position might have been exciting and challenging in your late 20s, but now the realities of hopping from one grant to the next is not as appealing as it once was.

Do you feel that you have achieved what you want at this stage of your career and are you now seeking a new challenge and meaning in what you do? The nature of jobs available is also changing, often driven by technological advances. The automation of production processes in manufacturing industries is an example.

Whole new industries are being created – the IT revolution has been joined by the telecommunications and internet revolutions, with the creation of thousands of new businesses and career opportunities.

Scientists frequently play an important role in these changes. Huge numbers of jobs are disappearing, while thousands of new ones are being created. For example, the challenges of stopping the damage to the environment, which threatens the existence of our planet, has created a whole new industry in which scientists are at the forefront.

Even if you have not moved jobs for some time, you might find yourself working in a very different organisation from the one that you joined a few years ago. Rationalisations, mergers, takeovers and globalisation all mean that the people you are working with, the culture and the environment may have been transformed since you started working for your current employer. For example, a mechanical engineer who joined a UK motor manufacturer in the Midlands a few years ago may now find that she is based in Shanghai working for the new owners in their design facility. Sometimes we are forced to re-evaluate our careers. Job loss, becoming a parent, losing a loved one or a serious illness can cause us to rethink what we want from our lives and our work, and how we combine the two.

Clarifying the issues – what's the problem?

It is important before considering a change in career to identify why you want to change. The issue could be to do with you, the job or the organisation that you are working for. Is it the nature of your job, or is it the conditions in which you work, the environment or the rewards that are causing you to rethink?

- I love my work but I don't feel I fit here any more.
- I'm often stuck behind a computer screen and have little contact with other people in my team.
- My work no longer has meaning for me.
- I don't find my work interesting/challenging enough.
- I'm not really fulfilling my potential.
- I'm not learning or developing as fast as I'd like.

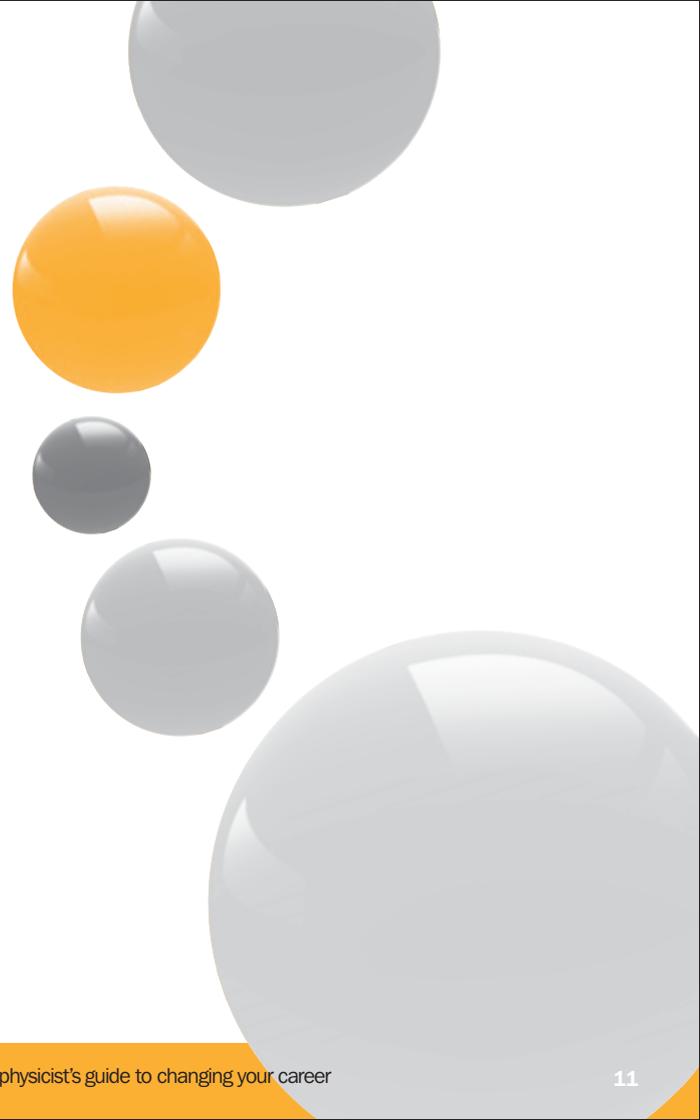
- The workload is very demanding and I often have to work late or at weekends.
- I don't feel I am valued properly or paid enough for what I do.
- My manager is not supportive.

It is not always necessary to consider making a dramatic change in career direction. Sometimes the solution can be found in the problem. For example, if you feel that you have outgrown your current job or organisation:

- Have you looked at new possibilities where you are now?
- Are there any projects or initiatives that you could become involved in?
- If there are no obvious opportunities, can you think of a new way in which you could use your strengths and develop?
- Could you come up with a proposal for your employers that would give you more of what you want?

Speaking up and trying to change things where you are now could be worth trying. You may be surprised by the positive outcome. Even if you have decided to move in a new direction, a change that works to your benefit in your current job may buy you some useful time and add to your knowledge and skills set.

Where do you start finding out about different careers and jobs?



There are numerous information resources available to help you find out about alternative careers for scientists.

Below are some suggested websites that provide information about various careers. Do your own research too because there are always new sites and information available.

www.scenta.co.uk

www.prospects.ac.uk excellent job profiles for different occupations and sectors.

www.insidecareers.co.uk excellent advice and information about jobs that appeal to physicists and scientists.

www.doctorjob.com

Many companies have invested heavily in the career sections of their websites to attract job seekers. If you know what kind of occupations and employers you are interested in, you must have a look at these. It is becoming harder to generalise about careers. A lab technician in one company may have a very different role to one in another company, even if they are working in the same sector, so check out career opportunities and routes for progression in different organisations.

Also, look at professional bodies for careers information. For example:

The Institute of Physics **www.iop.org**

Institute of Mechanical Engineers **www.imeche.org**

Institute of Engineering & Technology **www.theiet.org**

Academic/research posts **www.jobs.ac.uk**

The British Academy of Audiology

http://theloop.netplan.co.uk/~admin9/index.php

The Chartered Institute of Patent Agents **www.cipa.org.uk**

The Institute of Physics, Engineering and Medicine
www.ipem.ac.uk/ipem_public/

The Geological Society **www.geolsoc.org.uk/index.html**

Another good source is the websites of science faculties in universities, which give information about the occupations and employers that their graduates have chosen, plus links to relevant sites. An excellent way to find out about a possible new career is to speak to people who are already working in these roles. You may know someone already. If not, try approaching people who are doing the same or similar jobs, or who are working in the organisations that interest you.

There is no better way to find out about occupations and organisations than by doing some work experience or shadowing someone. If you are thinking of becoming a medical physicist, for example, find someone who will agree to your shadowing them for a day. Organisations are positive about arranging this for you. The Training and Development Agency for Schools now provides time in a classroom for would-be teachers so that they can get a good idea of what it's like before deciding whether to apply to do the training.

- Do your homework – research the careers that appeal to you.
- Talk to people in the jobs/organisations/careers that interest you most.
- Shadow people (e.g. if you are thinking of teaching, spend a couple of days as a classroom assistant, and try out more than one school).

Gaining greater self-understanding

As well as gaining knowledge and understanding about jobs and the job market, you should also do a stock take of your strengths and your suitability for an alternative career. There are a variety of tools available to help you to do this. Some help you to look at your aptitudes and skills; others at your personality (your preferred ways of thinking and behaving). There are also questionnaires that help you to understand your aspirations, values and career needs.

Have you tried making a list of all of your job skills and specialist knowledge, and evaluating how strong you are in these? Which do you most enjoy and which do you want to develop further? Are there new skills and knowledge that you want to acquire?

Look at your skills in a rounded way – not just your technical job skills and knowledge but also other strengths, in organisation, people management, leadership and strategic thinking.

A note of caution

As a physicist you might have followed your degree with a postgraduate qualification, developing your skills and specialist knowledge over several years. You have invested time, effort and money in gaining your qualifications and in building your expertise. It is easy to take for granted the skills and knowledge that you use daily in your job.

All of this is very valuable and should not be overlooked. For example, an engineer thinking of becoming a lawyer may have a distinct advantage over others if they wish to specialise in intellectual property law. Rather than looking in a totally different direction, it is worth exploring opportunities in related areas first where you can capitalise on your existing skills and knowledge.

Tools and resources

- *New Directions* – a career-change publication, published by the Institute of Physics.
- MBTI and SPF16 – ways to assess your strengths, interests, motivators, etc.

Should you see a careers adviser?

You may still have unanswered questions about yourself, your suitability for a particular career and the options available to you. This is where the Institute of Physics's careers advisers can help you:

- You have the benefit of speaking to an objective outsider.
- They should be able to find someone who knows about the kinds of careers, organisations and sectors that you are interested in and who understands scientists and people with science backgrounds.
- They may have tools and career-counselling approaches to help you understand yourself, to see what's special about what you can offer and to plan your future direction.

Written by Simon Broomer, Career Development & Job Search Specialist, CareerBalance Limited: www.careerbalance.co.uk.

Find out more...

More information can be found
at www.iop.org/careers.

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