

The physicist's guide to writing your CV

For members in or seeking 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.

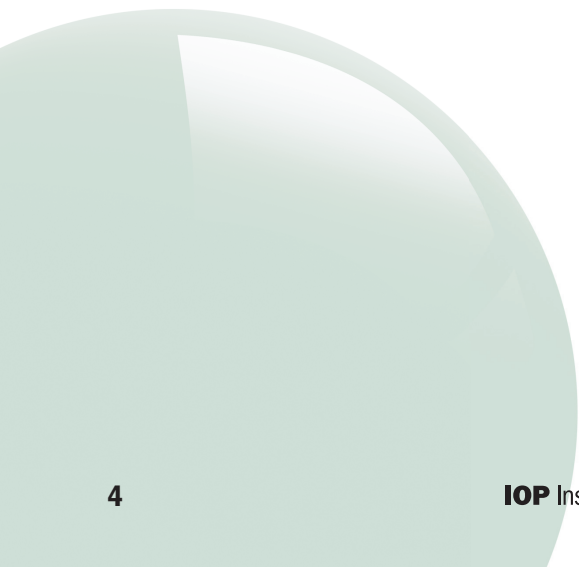
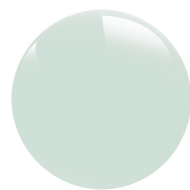
These guides are unique because the writer has taken into account the skills and abilities possessed by someone with a physics training or background, so they are specific and relevant to physicists.

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

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

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

Effective presentation of your skills, qualifications and experience is essential in today's job market. As competition for posts increases, you need to be sure that your CV or application will stand out from the crowd and convince a potential employer to interview you. In this short guide you'll be taken through the steps to produce a really strong, written application and learn how to demonstrate the strongest match with the employer's requirements.



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Introduction

If you are considering a career change or job move, one of the first steps required is to get your CV in order. It may have been years since you last had to present your professional experience and qualifications in writing and the expectations of employers may be quite different now. In this guide we'll take you through a process for producing an eye-catching, memorable CV and completing an application form with real impact.

First steps

It may be tempting to start the process of producing your new CV by digging out an old version and simply updating it with details of your previous job.

This can be a mistake if:

- you are looking for a change of direction;
- you haven't written a CV for five or more years;
- you are applying for work in a different country;
- competition for jobs is fierce.

Even if your next job is going to be similar to your existing position it is still better practice to start with a clean slate because it will avoid inconsistencies in style and give you a better chance of coming up with a fresh and engaging document to present to employers. You will also be less likely to fill your CV with outdated and irrelevant information.

In this regard, an application form should help an applicant present the most relevant and compelling information. But, again, it is easy to fill the boxes with text cut and pasted from old applications. Commit to writing each form from scratch and you are more likely to focus on what the employer wants.

Every job is different. Every employer will have a slightly different way of working and will therefore be looking for different kinds of people. This means that every CV must be unique. It is tempting to use the same CV for a number of different applications but a well targeted CV will stand

out from the pile on the recruiter's desk. Remember that the person who is shortlisting will have to match the CVs that they receive against a job description (their "highlight reel"). If you don't take the time to make the matches obvious, they may not have the time to dig out information or extrapolate it from your experience.

Being memorable on an application form is a real challenge because you have to answer the same questions as every other candidate and stick to a prescriptive format. Working from the "highlight reel" will help you to produce a form that is easy to shortlist – you need to be clear about what the recruiter is looking for in the answers you write.

The "highlight reel"

The first step in making any application is to have in mind a clear picture of what the employer's expectations are.

- What do you think they are looking for in their new employee?
- What skills will the successful applicant need to demonstrate?
- What kind of person will fit into the company or organisation?

You will find this kind of information from the vacancy notice, company website and job description (if one is available). Don't be afraid to ask for additional information about the position if the advert is vague. There may also be general information about the kind of job that you are applying for on a general careers-information website (see Resources section, p21). All of this will help you to prepare a "highlight reel", which will give you an indication of the criteria that your application will be judged on. An increasing number of organisations are also using social media to communicate with their customers or communities. Look for blogs, twitter feeds and pages on big social-media sites to help you build a picture of the way that the organisation sees itself and wants to be seen.

A typical job advert will provide information about the organisation; the people they are looking for; and the technical details about the post.

We are looking for clever, hardworking, innovative and hands-on scientists and engineers with a high degree of commercial awareness to contribute to the continued growth and success of our business. Our success depends on flexible and committed staff prepared to ensure we meet our customers' targets – development timescales are short, the specifications demanding and the projects often require frequent international travel.

Physicists – Medical Devices Group

We are seeking bright, ambitious physicists to create, analyse and develop new medical technologies. The successful candidates will be expected to make a solid contribution to a group with core business in drug-delivery devices, manufacturing systems and surgical technology.

You will be expected to:

- Immediately engage in a technically and commercially stretching environment.
- Contribute to and lead technically demanding medical technology projects.
- Effectively integrate with a talented multidisciplinary team of like-minded people.

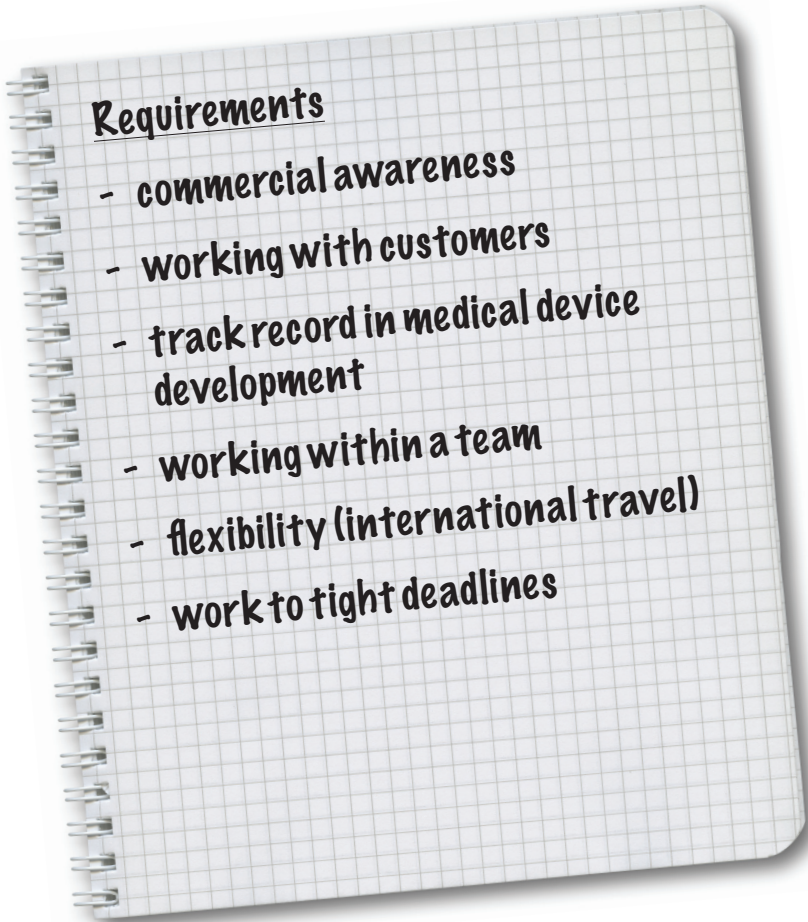
You will have:

- A first or 2.1 class degree in physics
- Intrinsically high levels of motivation
- Excellent communication and presentation skills
- A good mixture of analytical, experimental and creative capabilities
- A strong interest/track record in medical device development (an interest in this area is more important than actual experience, suggesting that the company is willing to train the right person in the technical knowledge in their field).

From this advert you can see that the employer has some specific requirements. Your first task is to identify the keywords and draw up your version of the employer's "highlight reel".

Which of the words stand out in the advert?

Draw up your version of the employer's requirements as shown below:



The “highlight reel” serves as more than a guide to your CV. It is also a reality check for your application. If you struggle to find evidence of the key skills or qualities being sought then you need to consider whether this is the right opportunity for you.

From the ‘requirements’ check list, you will need to formulate a list of your strengths, similar to the examples below. Now you need to jot down how you will convince the employer of your suitability in each item.

Clever – a little obvious because a technology company is unlikely to want anything else, but this means that your academic results will be scrutinised and that poor grades will be a disadvantage.

Hardworking, committed – again, few employers look for lazy people, but it means that you will need to highlight your work ethic, the effort you put into projects and times where you have had to be tenacious to succeed. Flag this when you talk to potential referees as an area in which they can support your application.

Innovative – a trickier one for you to demonstrate. Think about times when you’ve solved a problem in a unique way. If you have a background in research, identify the original elements of your work.

Hands-on – describe the techniques and equipment you have experience of, but ensure that you are familiar enough with them to describe them at the interview.

Commercial awareness – this may appear at first sight to disadvantage academic applicants, but with current trends for impact in research, you should be able to describe how you have met specific requirements and reacted to external drivers. If you can talk about being the person who adapted projects or working methods to respond to these pressures, then even better.

Flexibility – have you had to work on more than one project at a time or change direction quickly to adapt to new circumstances? This requirement also flags up a key difference between academic and industrial approaches to research – will you be happy to drop an interesting project if it doesn’t show commercial promise?

Deadlines/targets/specifications – all of the words in the advert that paint a picture of a fast-moving, high-pressure environment are also clues for potential applicants about the work culture. Review your work history and identify times when you've delivered successfully under pressure. Try to quantify the pressure – how much have deadlines been shortened by or how much additional work was delivered. Numbers and facts are compelling on CVs.

Now pause and look at this list – do you feel that you are the type of person the employer wants? Would your current boss and other referees describe you in this way? Are you comfortable with the quality of evidence that you'll be presenting on your CV to convince the employer of your value?

Let's look at the job-specific requirements:

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We are seeking bright, ambitious physicists to create, analyse and develop new medical technologies. The successful candidates will be expected to make a solid contribution to a group with core business in drug-delivery devices, manufacturing systems and surgical technology.

Again, the reference to academic achievement (bright) and also ambition. Do you have any evidence of ambition – have you ever put yourself forward for a promotion or interesting project? Have you chosen to study abroad or taken on a high-profile secondment or placement?

They are also introducing the nature of the role with three key words: create, analyse and develop. When you describe your technical experience you should look for opportunities to use these words. It might seem too obvious to present the identical words back to the recruiter, but you need to make your suitability for the job obvious at a quick glance.

As we find out more about the job, we see that the successful person will “hit the ground running”. Few details are given about the specific role, which may be determined when the appointment is made, but is probably more indicative of the flexibility required. Again, look for evidence that you have:

- made an impact in a technical role;
- worked on demanding projects – ideally showing leadership;
- developed good working relationships in the past.

prepared to ensure we meet our customers’ targets – development timescales are short, the specifications demanding and the projects often require frequent international travel.

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The advert is well written and we can already guess much of what we find at the end of the statement.

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- Intrinsically high levels of motivation
- Excellent communication and presentation skills
- A good mixture of analytical, experimental and creative capabilities
- A strong interest/track record in medical device development (an interest in this area is more important than actual experience, suggesting that the company is willing to train the right person in the technical knowledge in their field).

If we review the whole advert we see that the employer repeats a couple of key points. They want bright/clever people and state a minimum degree class. They describe a demanding and commercially focused working environment. They want the candidate to be creative, analytical and technically “hands-on”. Of all of the demands in the advert, the fact that these are repeated suggests that they will be the critical selection criteria.

If you go through this process with any advert and then write a CV that emphasises the same skills and achievements, your chances of being shortlisted for interview improve dramatically. The CV for this job has to emphasise creativity and innovation. It has to present evidence that you work hard and are commercially aware. Your scientific approach must highlight creativity, analysis and experiment design. These words are not unique to this employer or post, but the emphasis and pattern in which they appear are distinctive – almost like a fingerprint. A general CV sent out to every employer will not look like this and is unlikely to be selected if the competition is fierce.

To ensure that your interpretation of the list is accurate you could also try to talk to someone who has a similar job or works for the organisation to that you are applying to. They will be able to fill you in on extra details – typical projects or problems that the work involves, and any skills gaps at the company that you may be able to address in your application.

With your tailored notes and evidence of the skills that you know this employer wants, you can now start to construct your CV.

The process is the same for an application form – identifying the key attributes being sought and the culture of the employer from the phrases and words that they use. The next step is to think about the experiences you have had that convey your suitability most effectively. Finally, write, edit and rewrite these snapshots of your working life until they deliver the most engaging evidence.

Rules of CV writing

Although your CV should be written for a specific job, there are some general areas of good practice that can be applied to all CVs.

1. It must be tailored to a specific job.
2. It must be easy to find the key information and be visually appealing.
3. Errors in spelling or grammar are completely unacceptable.
4. It should not contain irrelevant information.

Designing your CV

At first glance, a CV has to be a careful balance of information and “white space”. It is difficult to give the most important information on your CV enough emphasis if it contains long paragraphs of text or if you have crammed too much in. Remember an employer is likely to give less than a minute of their attention to your CV that you took many hours to craft. What will they see in the first 20 to 30 seconds that will convince them to look again?

That first glance should take in the following:

- three reasons to shortlist you for interview;
- your name and level of education;
- what you are currently doing.

The example CV, on page 22, should help you to construct a personalised, tailored CV. As you are pulling together your experience and qualifications, keep referring back to the “shopping list”. Are you giving the most emphasis to the skills and experiences that match this?

In most jobs, the day-to-day activities will change with time. If you’ve had a job for more than a few years you can give an overview of your role with a brief paragraph before highlighting your best achievements. For our example job, this might read something like this:

“Over the past five years I have worked on a variety of projects with industrial partners from the biomedical sector, leading international researchers and funding providers. I have extensive technical experience of all aspects of the research process from defining objectives and securing funding to design, implementation and evaluation of experimental processes. During this time I have taken on increasing management responsibilities for a group of researchers.”

This paragraph could work in either the covering letter or CV – try to use the two together to produce the best package. Covering letters tend to be written in a more narrative style, whereas bullets and key points are often seen on CVs, but think about which fits for your experience. DON'T assume that the letter will accompany the CV through the whole process, so ensure that all of the facts are in the CV without duplicating exactly the text in the letter.

Below this introductory text you can list the key achievements that you feel will convince the employer that you are worth further scrutiny. Focus on showing them the impact that you have had and on times when you have influenced others or the direction of your work; try to include numbers and facts, and avoid clichés.

Again, some examples:

- within my organisation I am recognised as an expert in developing multi-sector projects, as evidenced by being invited by two colleagues to support the liaison with their industrial partners and to reconcile the tensions between academic and industrial approaches;
- I have considerable expertise in convincing funding partners to invest in research, having secured £568,000 for work into sensor technology;
- the 37 citations that my work has received are evidence of the regard in which my work is held by my professional peers and the impact that I have had in my current field;
- I have been invited to speak at four international and national conferences, have presented more than 40 papers at conferences and have published 24 peer-reviewed papers with high impact ratings.

Don't worry if your numbers aren't as compelling as those in the examples – you can always use comparatives to show how you brought in more money than 90% of your colleagues, or had satisfaction ratings in the top 15%. There are many metrics that you can use – just try to remember that the employer needs to measure you against other applicants. Anyone can claim to be a good communicator or team player – how will you prove it?

Rules of application forms

Each form is tailored by the employer so that it is easier to stick to their agenda, but nonetheless mistakes are common.

1. Complete every section, even just to say “not applicable”.
2. Follow instructions – failing to complete the form with black ink, block capitals or ignoring word counts suggest you either can’t follow simple instructions or ignore them. Neither impression is helpful!
3. Don’t waste precious space with preamble in the skills boxes – put your story in context in a single line, then focus on what you did and what difference you made.
4. Don’t be paralysed by the form. If your experience doesn’t fit the boxes, make contact with the employer and explain the problem. Show initiative and confidence by finding a solution to this problem, but don’t criticise the form!

Completing the application form

Always allow at least twice as much time as you think it will take you to finish a form – they are surprisingly time-consuming. If the application is to be submitted online, be clear about the submission procedure. Be sure that you know:

- if you need to (or have the option to) attach any documents to the form
- whether the form can be saved part-way through completion without being submitted;
- when the deadline is (computer-based systems are unlikely to let you submit via second post);
- that the form and website are compatible with your computer and web browser.

Employers use application forms to give applicants a level playing field, which means that they are potentially making life much harder for themselves when they shortlist because their requirements should be clear. However, the primary filter is from mistakes made across the form – not completing sections, ignoring instructions or word counts. These simple mistakes eliminate most candidates from the recruitment process before their carefully crafted narrative answers are even seen, so check and double check every element of the form.

Assuming that every i is dotted and every t is crossed, the most important part of the form is the structured-questions section. Each employer will construct the questions that give candidates the opportunity to demonstrate sought-after skills. Some will be explicit, giving a detailed question with many parts to guide you through the answer that they expect. Others will give you more freedom.

Two sample questions:

“Describe a situation where you were required to come up with different options to solve a problem and where you had to evaluate them. How did you ensure that the options were practical and that they addressed the problem? How did you go about evaluating the options? What was the outcome?”

“What is your greatest achievement to date?”

The first gives you a format to follow, but remember that the description of the situation should be succinct – simply enough to give the answer, context and meaning. The focus of your answer is on what you did and why you did it, what you learned and the difference you made. The second question is more challenging because the employer wants to read about an achievement that has value to them – so be clear about the skills and relevance to the job on offer.

The word limit in these sections is a good guide. If you have used far fewer words than suggested, ask yourself why. If you have overshoot the limit, you need to be more efficient with your communication.

Dealing with negative information

Not all information that you need to present to employers during the recruitment process will be positive. If there are difficulties or negative elements in your career history, it can be tempting to omit them or even misrepresent your background. If found out, this is likely to result in a withdrawal of an offer – and if not, the stress of keeping things secret may take the gloss off your new opportunity.

It is far better to find a way to present negatives without undermining your desirability to the employer.

Each case is likely to be different, but some general guidance is that significant gaps in a chronology will stand out to an employer. Those familiar with reviewing CVs will often “walk through” a person’s professional history once they are through the first screening process. They are likely to notice any unaccounted-for time and this may distract them from the headlines of your CV and be the basis of their first questions. It is better to avoid this by referring to the situation briefly and factually.

If you have been unemployed for a significant period you can still present what you were involved in during this time under a heading of “Voluntary work” or “Other activities”. Use the same approach – focus on skills and achievements developed or sustained during your time away from work.

Most of us can expect to face redundancy or a period of unemployment during our careers. What will define us is how we manage this difficult situation, and a positive, can-do attitude is going to more than compensate for the gap in your career history.

If your time away from work is due to illness, you do not need to give details on your CV, but you should expect to have to account for that time at the interview. It might be useful to make contact with the employer before submitting your CV or application form and discussing this with them over the phone so that they are aware of your history. If you want to talk this through with someone before contacting the employer, remember that the IOP Careers Service is completely confidential.

If you've left employment (or been dismissed) because of a problem with a colleague or boss, this doesn't need to feature on a CV or application, but may come up at interview. Avoid being defensive or blaming others (even if you did nothing wrong) and focus on what you've learned, how you've developed and your subsequent successes.

Something to keep in mind is that any interruption to your career is going to represent a tiny fraction of your working life. Focus attention on the positive achievements in your history and work out an honest, but forward-looking way to describe any difficulties that you have faced.

Resources

The IOP website has an extensive careers section, with links to employers in key industrial areas, profiles of physicists in a range of careers and advice on managing your career.

www.iop.org/careers

The brightrecruits.com website (also from IOP) carries vacancies for jobseekers with a background in physics or engineering. You can sign up to receive relevant opportunities by e-mail.

<http://brightrecruits.com/>

The Prospects website is a general careers site, so there is a limited amount of information on highly technical careers. Its strength is in describing a wide range of alternative careers as well as carrying many vacancies. It is principally aimed at new graduates, but is a good source of information for career changers

www.prospects.ac.uk

CV layout – personal information

Chris Kay CEng MInstP

A first glance at some CVs reveals ... it's a CV. Never, EVER use Curriculum Vitae as a title. If your CV needs to be found in a pile, this may make the task so onerous that the employer may simply decide to move on. Instead, your CV should state your name and (if relevant) designatory letters, which will instantly tell the reader about your qualifications and professional status (for example, if you've been awarded CPhys or have similar recognition).

- **Current Status**

Personal information is obviously important because it allows the employer to make contact with you if they are interested in your CV. However, putting this information at the start of a CV is wasteful and uses up much of the critical space that a reader's eye will fall on first. Is it more important for the employer to know about your driving licence, postcode and marital status than your current job?

- **Education and Qualifications**

Having conveyed this information in a few letters, you have the option to move your education onto the second page of your CV if you feel that it is less important than other information.

Qualifications are usually presented in reverse chronological order, but don't be afraid to rearrange this if one is more relevant.

● **Professional Experience**

The next section is usually employment history unless you're planning a significant change of direction, in which case your skills might be more relevant. If your current job is less related to the position you are seeking than a previous post, then you can change the order in which you present them as long as this is clear – use a heading such as “Research Experience”, “Engineering Experience” or “Medical Devices Experience” for the relevant job (use your “highlight reel” to choose the best title), but be aware that this will diminish the value of other experience. Try to avoid the title “Work Experience” – “Professional Experience” gives more impact.

As you describe your work history, try to think of concrete evidence of the impact that you have had in each role. If you can identify tangible information – percentages, amounts of money, numbers of people – this is much more compelling than simply stating you improved efficiency (for example, dealt with lots of clients or made substantial savings). For each job you are going to list on your CV (and you don't need to put them all on in detail) think about what you contributed to your employer. How did your approach make a difference? These contributions should be consistent with the employer's needs, so ensure that the language you use to describe them echoes the advert and any vacancy information.

● **Contact Details**

If personal information doesn't take the top spot, consider using a footer or put them on the second page. As long as they are easy to find, they don't have to be the first thing seen. Include your e-mail address and a personal website if it is something that you'd like an employer to see. You don't even need to include marital status or driving licence details (unless the latter are specifically required).

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Crossfields,
Hendtown, HN1 4BB

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07988 654987

CV layout – background

- **Skills and Technical Experience**

Your skills should be ordered according to the value that they have to the employer. Make your level of expertise clear.

This section must be tailored to the job on offer, but don't restrict the list simply to those mentioned in the advert – use your market knowledge to anticipate skills that are likely to be attractive to the employer and in short supply.

Titles for the sections of your CV are your choice – don't be bound by convention, but remember that information must be EASY to find and RELEVANT. It could be that the employer would be most interested in “Energy Sector Experience”, “Foreign Language Proficiency” or “External Networks” – use titles that give them the simplest route through your CV.

- **Professional Memberships, Awards and Distinctions**

Your IOP membership, involvement in relevant committees or boards, prizes or industrial distinctions can be grouped or separate – again, the only rule is that information must be EASY to find and RELEVANT.

- **Interests**

Only personal interests that reinforce your suitability for the job should be included. If you feel there are areas in your professional experience that are weak, your interests can be vital, particularly if you are active and achieving (i.e. running groups or achieving challenges). Unusual interests can also help you stand out from the crowd.

- **References**

Another critical section – who is willing to speak on your behalf? Don't feel that you have to include a current or former employer if you have problems with them – identify someone who can give a genuine, fair (but positive) review of your performance in the workplace.

Get more value from your references...

- What do they know about the job and your specific suitability?
- Might they have some insights or contacts that will help your application?

Take time to talk them through the job, your CV and which aspects you would like them to support when contacted by the employer.

Covering letter

Send the letter to a specific individual – call the recruiting department if necessary (but be ready to sell yourself and make a great first impression).

Name contact
Employer's address

Your address
Today's date

Include job reference and title if available

Dear Ms Scott,

Please find enclosed a CV for your vacancy for a Research Engineer as advertised on your website.

Ensure that the reader can quickly identify the reason for your letter – remember this may not be the only vacancy currently available. Note where you saw details of the job – this is useful information for the recruiter.

I'm very excited by the opportunity to work in your Development Centre, where I believe I will be able to make a vital contribution to your team, given my experience of and the success I have had in.....

Let the employer know what benefits you will bring – be as specific as you can here, but remember that the full details must be spelt out in the CV. Demonstrate your knowledge of the organisation and their activities here – and if you've work shadowed or interviewed someone about the job, mention them here and the valuable insight that they have given you. (The employer is likely to ask for their impressions.)

Also mention any successes in your current role – in the context of their relevance to the job that you are applying for.

A common mistake made in letters is to give too much emphasis to the value of the job being offered to YOU rather than the value of YOU to the employer. Although you want to express a genuine desire to work for the organisation, remember that the employer will want to choose the person who will have the greatest positive impact in the role. This is particularly dangerous if you are making a career change – the letter should convince the employer of the relevance of your skills and experience and minimise fears that you will gain free retraining at their expense or use them as a career springboard.

If I can provide any additional information, please don't hesitate to contact me. I look forward to hearing from you and would like to thank you in advance for the time that you have taken over my application.

Yours sincerely
Chris Kay

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