Bright ideas for

# USER EXPERIENCE MANAGERS

USERFOCUS

USERFOCUS


# THANKS FOR BEING PART OF THE USERFOCUS COMMUNITY

I love creating articles, resources and eBooks for the user experience community.

But it's my consulting and training work that pays the bills.

If you want to support the work that I do, here are some ideas.

## ATTEND A WORKSHOP

Attend a public training courses. You'll find an up-to-date schedule here:

https://www.userfocus.co.uk/training/index.html

## BUY AN ONLINE COURSE

Buy one of my online video courses on Udemy. You'll find a list here:

https://www.udemy.com/user/davidtravis/

## INVITE ME IN

I can bring my workshops to you and run them for a fixed all-inclusive fee no matter where you are. You'll find more information on in-house training here:

https://www.userfocus.co.uk/training/in-house-training.html

## COLLABORATE

Commission me to optimise the user experience of your product or service. You'll find more information on my consultancy services here:

https://www.userfocus.co.uk/consultancy/index.html

# About this eBook

This is the third in our "Bright ideas" series of eBooks where we curate previously published articles from our web site. This edition focuses on articles of interest to people who take a strategic interest in user experience.

Although we've titled it, "Bright Ideas For User Experience Managers", you don't need to have "manager" in your job title to benefit from the articles in this collection. This eBook will be of use to anyone who wants to make their organisation more user centred, or who needs to communicate the benefits of user experience, or who needs to recruit user experience practitioners.

The articles in this collection were published on our web site between September 2005 and May 2011.

A quick word about the layout of this eBook. We have published this collection simultaneously as an ePub and as a PDF. Because our layout is aimed at making online reading an enjoyable experience, we've used a large font. But we've also made sure that printing remains a reasonable option. If you prefer to read a printed version, you'll save paper and still find it very readable if you print this book as two pages per sheet.

Finally, if you enjoy this book and you'd like to hear about new collections the moment they're published, sign up to receive our monthly newsletter by clicking on the link below.

— *David Travis*

Get the Userfocus newsletter (it's free!).

# How to recruit a UX leader with the X factor

*Philip Hodgson*

**We're increasingly asked by organisations for advice on building a user experience competency. Our advice is to start at the top and get the right person for that first critical leadership role. User experience leaders demonstrate 3 core competencies: they understand research; they follow user experience methods and standards; and they are great communicators.**

Scan any job-posting site to see what a mess our discipline has got itself into. User experience researcher, user researcher, user experience designer, usability specialist, human factors expert, interaction designer, information architect, user experience expert, user experience architect, user interface designer… these are just some of the job titles that have appeared over the last few months on one popular jobs board.

This variety of job titles perplexes people who want a job in the field but it causes an even greater problem for CEOs who want to create a user experience competency within their company. When job titles are virtually interchangeable, a candidate armed with a generic CV and a word processor can switch identities faster than Clark Kent. The truth is, it's like the Wild West out there — job titles can mean anything you want them to mean. As a result, matching candidates to

vacancies can become a lottery, with hiring managers searching in vain for that critical X factor.

The real problem, of course, goes deeper than the job title. Vague job titles are a symptom of companies and recruiters who don't know the field well enough to know what a user experience team should look like, or whether they have found good candidates or not. The knock-on effect of this is obvious: unbalanced teams lacking the right skills and experience, teams that lack an authoritative voice and, ultimately, products that slip through the user experience net.

Simon Cowell once said, "If I said to most of the people who auditioned, 'Good job, awesome, well done,' it would have made me actually look and feel ridiculous. It's quite obvious most of the people who turned up for this audition were hopeless." So let's get real. How can you guarantee that you hire the right person for your all-important first user experience leadership role?

## To find your first user experience expert — first find a user experience expert

You'll have already noticed the Catch-22. If you don't have a user experience group, and if the hiring managers don't know the field, then how can you know whether you have found a strong candidate or not?

You can't.

So you need someone on your hiring committee who knows the area. Engage someone with a strong user experience background — someone who has built teams and hired user experience staff — to help you find your first user experience

leader. Alternatively, use a specialised recruiting agent, one who focuses on usability and user experience.

## Hire the team leader first

Building a team, observed Sir Winston Churchill, is not like building a house. You don't start from the bottom and work upwards and then add the leader on top like a chimney pot. You build a team from the top down. This means you shouldn't start by hiring inexperienced or junior people, but hire your leader first. Start with the team leader so that he or she can establish the operational framework, plan strategy, evangelise user experience and make subsequent hiring decisions. Appoint this person at an organisational level that carries authority: at least at Director level, and preferably at VP level.

## Avoid the 'one-man band'

A well-balanced user experience team will represent a number of disciplines and skills. But you won't find all these skills in one person. Don't expect your user experience hire to also be a user-interface designer or an ergonomist or an information architect. He or she is likely to have a good working knowledge in these areas but you should focus on the main user experience strengths when hiring. You are not hiring a 'one-man band' — you are hiring the Principal First Violin. This means you must write job postings that are specific. Avoid the temptation to shovel in every role and responsibility you can think of. Otherwise, you'll send a signal to candidates that you don't know what you are doing, and the strongest candidates will hesitate to apply. Remember you are hiring a

specialist not a generalist. So think specialist, specialism, specific.

I've also been surprised how many companies adopt what I call the 'Andy Capp' model of team building for their user experience teams. Comic strip character, Andy Capp applies for a job as a 'handy man' but then admits he has no experience or skills for any of the required work. "In what way are you a handy man then?" asks the interviewer. "I just live round the corner," replies Andy.

It is not uncommon for companies to staff user experience teams with internal people who do not have the skills or experience, but who are looking for a 'home'. These are sometimes admin people, or people whose current job has been eliminated, or sometimes just people who have been around a long time but don't easily fit in anywhere else. This approach devalues user experience and usability, and these kinds of teams usually struggle to be heard and are frequently ignored by design and development teams. If you are going to do this, do it right. Hire specialists not 'warm bodies'. Hire contributors, not facilitators.

## Make sure your new hire meets these 3 criteria

What should you look for in a user experience specialist? Here are three competencies that will guarantee your first hire is a good one. Insist that candidates provide hard evidence (not just 'talk') of their ability to meet each of these criteria:

- The candidate should be a researcher.
- The candidate should be able to apply user experience methods and standards.
- The candidate should communicate well.

## *The candidate should be a researcher*

User experience is a research discipline, one that concerns human behaviour. So, first and foremost, you need a researcher: preferably one with experience in researching human behaviour. This allows for a wide range of disciplines that might include, among others, cognitive science, human factors, anthropology, sociology, ergonomics and psychology. The discipline that takes a scientific approach to studying human behaviour is called Experimental Psychology and this is a good indicator of what to look for.

**What's important is that the candidate understands data.** The candidate will understand how to design an experiment, and how to control and measure variables. He or she will know how to avoid collecting invalid or unreliable data, and will know the importance of prioritising objective behavioural data over subjective opinion data, and will be able to explain to you why this is important. The candidate will understand hypothesis testing and will know the scientific method; and he or she will know statistical methods, which tests to apply, and when to apply them.

It is not enough for candidates to talk about these things, they must have a demonstrable track record of work that they (not "the team") have carried out. Finally, a good researcher will demonstrate critical thinking, and should bring a dose of healthy scepticism to proceedings.

## *The candidate should be able to apply user experience methods and standards*

Does the candidate know about user experience? You should not have to probe very deeply to discover this. The candidate

will know about the ISO 9241 standard and will be able to recite the ISO definition of "usability" (or at least paraphrase it). He or she will be able to discuss User Centred Design and will know how to 'sell' this design approach to you.

The candidate will know which user experience methods are appropriate for a given situation, and will know how and when to modify methods to accommodate limited budgets and aggressive timelines. He or she will know the difference between types of usability tests: for example, between formative and summative tests; between moderated and unmoderated tests; and between remote and lab-based tests. The candidate should also have experience with a range of other user experience methods and techniques, such as field research, user interface inspections, card sorting and persona creation. The candidate may not have experience with every possible technique (eye-tracking experience is still a rarity) but will at least know the pros and cons of these methods.

As a hiring manager, if user experience is not your field, you may find it helpful to review the UXPA document, Key questions to ask your user experience testing supplier, and adapt the questions to suit a job interview.

### *The candidate should communicate well*

Good communication equates to good thinking. So the ability to communicate well — including the ability to write well — is a reliable indicator of a person's ability to marshal their thoughts into a coherent idea or argument, and to inform or influence others. Good communication is also a vital ingredient in managing and motivating a team. And it also turns out to be a good indicator of a person's ability to see a project through to completion, because when the participants

have gone home, and all the M&Ms have been eaten, someone has to write the study report.

Increasingly we see user experience personnel focusing their main efforts on the more 'visible' aspects of studies (recruiting participants, conducting test sessions etc.) and then dropping the ball when it comes to disseminating the findings effectively — in some cases failing to document studies at all. This is the user experience world's version of academia's 'ABD' problem, where a doctoral candidate has completed 'all but the dissertation'. Of course, it is the dissertation that is the most important part of graduate study because it is the evidence that one can interpret and make sense of one's data and can connect it to the existing body of knowledge on the subject. More importantly it is how one shares one's work with others. Similarly in the user experience world, what matters is the ability to connect the data you have collected to the system changes the designers and engineers have to make. Being able to convey your thoughts and arguments accurately and concisely in writing, presentations and diagrams is an essential part of team communication.

## Final thoughts

Resist the temptation to simply hire the best of the crop of the people who apply. If the candidates do not meet your criteria, start over with the job search. Hiring no one will leave you in a stronger position than hiring the wrong person.

# Institutionalising Usability: 5 ways to embed usability in your company

*David Travis*

**Trying to embed usability in an organisation needs more than persuasive, logical arguments. You also need to appeal to managers' emotions and political ambitions. This article describes five successful strategies that we've seen work in companies large and small.**

At one time or another, most of us have tried to convince senior management that they need to invest in usability by appealing to logic: we describe the clear and obvious cost benefit of usability. We point out that good usability increases revenue, creates loyal customers, improves brand value and results in internal process improvement. Dozens of studies now support these assertions, so it's frustrating when managers listen patiently to what we have to say — and then completely ignore us.

The reason these sorts of arguments tend to fail is because the decision to institutionalise usability isn't just a logical argument. Because user centred design has an impact on every part of the organisation, any decision to embed usability is a decision to undertake organisational change. Logical reasoning isn't sufficient when we move into this territory because organisational change can only be achieved through people, and this means you must address emotional needs too.

Enough of what doesn't work. Let's now turn to five lines of attack that we've seen flourish at different clients in the past.

- Think Strategically
- Recruit a Top-level champion
- Raise Awareness
- Demonstrate ROI
- Talk the right language

If you look closely, there's even an acronym in there: START.

## Think Strategically

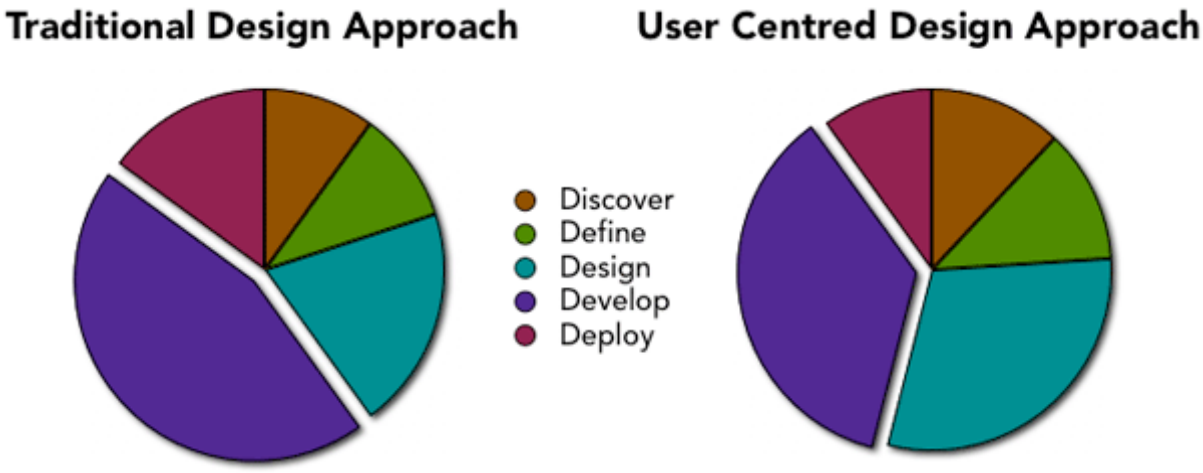
If your organisation is just dipping its toe in usability waters, it's likely that usability testing and expert reviews will form the bulk of your work. At this point, be careful that you don't fall into a common tactical trap: usability testing on every project. Instead, try a more strategic approach and focus your involvement on key projects. Use these criteria to identify key projects:

- How important is good usability to this project?
- How important is the project within your organisation?
- How likely is it that you can use the project to measure the before and after benefits of usability?
- How supportive is the project manager of user-centred design?

If your organisation has a defined usability function, aim for end-to-end involvement on mission critical projects that have a lot riding on the user experience. The biggest payback from usability occurs when it is done early in the lifecycle, so 80% of your project work should be focused on understanding

customers and iterating designs. Avoid projects where the design team want you to rubber stamp their design using your expert judgement. You should insist on user involvement. And when it comes to testing, it is fiscally irresponsible to usability test if the schedule doesn't include time to revise the design. Just say No.

Project managers will push back. One comment you're likely to hear is that a user centred approach will take too long and will increase timescales. This is the time to show that it's not about more time, it's about allocating time differently. All development projects go through five phases: Discover, Define, Design, Develop and Deploy. With a traditional design approach, projects speed through the early phases but are penalised later on. For example, developers waste time debating solutions, or the project requires expensive fixes late in development, or unforeseen user needs extend the deployment phase (and often all three). In contrast, a user centred design approach spends longer in the early phases but makes up this time during the design phase. This is because users' unspoken needs are flushed out by prototyping, usability bugs are trapped before the coding phase and task-led design eradicates superfluous features and so speeds deployment. We've found the following chart a useful way to help managers understand how user centred design needn't take any longer than a traditional design approach.




*These charts show two ways of allocating time on a development project. Projects that use the traditional design approach need to allocate more time to development and deployment, since unforeseen problems will arise. In contrast, user centred design projects allocate more time to the early design phases, which means the project needs less time to fix usability problems later in the lifecycle. The amount of time spent on the project is the same with both design approaches.*

## Recruit a top-level champion

Because user centred design has ramifications throughout the organisation, you'll need board level support to implement such a fundamental change. Identify someone at this level in your company who is a clear customer advocate. If no-one springs to mind, seek out a manager who is leading a customer-centred initiative like quality, six-sigma or business excellence and demonstrate how usability supports this initiative. Be prepared to challenge assumptions. Senior managers will assume that all your company's new products and services are tested with consumers – especially if they have seen the usability lab. Once you identify your advocate, here are some ideas that we've seen persuade managers that you can help them achieve their political ambitions:

- Show how user centred design facilitates key business objectives, such as increasing conversion rate, decreasing churn and improving customer satisfaction.
- Prepare a snappy "wake-up call": dissect a product or a project that failed because user requirements weren't considered. Explain how usability testing could have saved the company its embarrassment.
- Play some usability test footage showing vocal key customers struggling with your web site.

## Raise awareness

Organisational change is most effective when you empower other people to implement it. Some ideas we have seen work include:

- Maintain a usability intranet with past reports, highlights videos, guidance for best practice, a slide show... advocacy material that your supporters can easily customise.
- Subtly educate your boss and your clients: for example, send out a lively, monthly newsletter to insidiously teach people that usability means more than testing.
- Raise awareness of relevant legislation (like the Disability Discrimination Act) and international usability standards.
- Make friends with editors of internal newsletters and PR experts in the industry.
- Speak at industry meetings and usability conferences. This will validate the importance and relevance of your work in the eyes of your peers.

- Increase your team's profile with professionally-produced posters and giveaways like mugs and t-shirts.

## Demonstrate ROI

Another reason those cost benefit arguments don't always work is because they aren't based on data from your company or industry. For real impact, collect "before" and "after" ROI data to show the demonstrable benefits of your involvement. For example, estimate the likely savings during development, sales, use and support. Set this against the costs of your involvement to show that usability doesn't cost — it pays.

If you need to estimate any parameters, err on the conservative side. And be sure to phrase your findings in the language of business, not research. (Clue: The language of business usually starts with a currency sign.) For example, don't just talk about the number of successful participants in your test. Relate this to key business metrics like conversion rate and reduced support. With our e-commerce customers, we educate them about the "domino effect": usability problems early in the process erode the customer base, leaving fewer customers to enter subsequent phases. For a complex e-commerce transaction, it's not unusual for this effect to reduce sales by 50%-75%.

When you have ROI data, remember that usability goals are business goals. So use the numbers to define targets (KPIs or usability metrics) and get project managers to sign up to them.

## Talk the right language

There is a simple way to present usability data that, under the right circumstances, can make it irresistible and compels

people to action. All you have to do is find it. In some organisations, this may be a detailed, analytical report that carefully weighs the costs and benefits of fixing each usability problem. For other organisations, it might be a PowerPoint presentation, summarising the key findings. Senior managers often get engaged when you show a highlights video, and Morae is truly a superb application for rapidly putting these types of presentations together. But you may need to get creative. In one organisation, the most powerful tool we observed was when they moved from standard reports to a highly visual, one-page "usability dashboard". These reports spread through the organisation quicker than an e-mail virus.

If you were going to summarise the results of your 3-day usability test on just one page, what would you put in it?

# Selling Usability to Your Manager

*David Travis*

**Before you can implement a usability initiative in your organisation, you'll need to convince your manager it's worthwhile. The obvious approach is to use a cost-benefit argument, but experience shows that this approach often fails because many managers find the data unconvincing. A more productive approach is to tailor your argument based on your manager's MBTI personality type.**

You're enthusiastic about usability and want to make it happen within your organisation. But your manager doesn't share your enthusiasm. Perhaps your manager sees usability as a diversion from the business of product or software development, or thinks it's too fluffy to truly inform design, or sees it as a threat to his or her expertise. How do you go about changing your manager's mind?

Most people will tell you to assemble a cost-benefit argument for usability. There are many resources on the Web to help you do this, and Randolph Bias and Deborah Mayhew have written an excellent book on the topic. To assemble a cost-benefit argument, you simply take a piece of paper and draw a vertical line down the middle. On the left you list the expected benefits, such as increased sales, fewer calls to customer service, and increased loyalty. On the right you list all the costs, such as paying participant incentives and renting a usability

lab. You then pencil in guesstimates of the cost of each item, trying to be as realistic as possible.

But often, this just isn't enough. I'm a great advocate of cost-benefit calculations and recommend them as a way of institutionalising usability within your company. But as a psychologist, I also realise that changing the company culture is very different from changing a specific individual's opinion. Cost-benefit arguments will work for some people, but they assume a level of engagement with data. People who are detail-averse will listen uncomfortably to your presentation and feel that some underlying concerns haven't been addressed. They might be thinking, "How will this initiative be perceived by my manager?" or "How will the developers react to having users criticising their designs?" or "How will I be able to control something I don't understand?" So I'm proposing a three-step approach that combines using these key arguments with a communication style customised to your manager. The three steps are:

1. Assemble the benefits of usability
2. "Type" your manager
3. Tailor your argument

## Step 1: Assemble the Benefits of Usability

The first step is to review the key benefits of focusing on usability. There are four: higher revenues, loyal customers, improved brand value, and process improvement. Use the following items as a checklist to identify two or three benefits that are most relevant to your product, company, or industry. Then we'll move on to step 2.

## *Higher Revenues*

- Fewer changes downstream means earlier time to market.
- Earlier time to market brings competitive advantage.
- Customers use all of the system's functionality, not just a subset.
- Early and continuous customer involvement reduces lifecycle costs.
- An easy-to-use system means fewer calls to customer service.

## *Loyal Customers*

- Loyal customers generate repeat business, demonstrate immunity to the competition, provide higher margins, and are less price-sensitive.
- Value to customers is delivered in the first release of the system as well as in upgrades.
- Loyal customers provide free word-of-mouth exposure.

## *Improved Brand Value*

- Customers learn how to use the system more quickly.
- Improved usability provides a competitive edge.
- Higher service quality leads to improved customer satisfaction.
- Customers can focus on their goals rather than the technology. This leads to increased productivity and fewer errors.

*Process Improvement*

- Less rework is required to meet customer requirements: 80 percent of software rewrites are due to the fact that important functionality was missed the first time.
- The process keeps developers focused on important business metrics, such as conversion rates for Web sites or "fault-not-found" product returns.
- Risks are managed and reduced by helping you prioritise features and product offerings.

## Step 2: "Type" Your manager

The next step is to tailor these benefits to the needs and interests of your manager. When you sell anything — whether it's usability, MP3 players, or automobiles — you need to tailor the benefits to the needs and personality of the person to whom you're selling. People are different in the way that they prefer to be approached, get information, and make decisions; different things "ring their bell." To sell usability to your manager, you must understand your manager's personality.

One well-established personality model is the Myers-Briggs Type Indicator (MBTI). Based on the personality theories of the respected psychologist Carl Jung, the MBTI is over fifty years old and is administered to over two million people annually. It has been translated into over thirty languages and is the subject of over 9,000 articles.

MBTI starts from the premise that just as many of us have a preference for using our right hand, we also have an inborn preference in the way we behave and react to situations. This doesn't mean that we must always behave in this way, just as I

can write with my left hand if my right is injured. It just indicates a natural inclination or preference for certain ways of thinking and behaving. I can behave contrary to my personality type, but it feels odd, as it feels odd if I use my left hand to sign a form.

If you feel uncomfortable being "pigeonholed" by the MBTI, just see it for what it is: simply another instrument to study human behaviour. As such, it is not all that different from usability testing itself: Both are practical tools used to gain insight that might not be otherwise available. Just as usability testing is useful for understanding human-computer interaction, the MBTI is useful for gaining insight into the behaviour of people you work with — and why this sometimes differs from what you would do in the same situation. As Steve Krug has observed about usability testing, "The point of testing is not to prove or disprove something. It's to inform your judgment." Something very similar could be said of the MBTI.

So how should you adapt your argument for usability to your manager's personality? The MBTI personality model is based on four preferences. According to Susan Brock, two of these are especially important when we are trying to persuade others.

### *How Does Your manager Prefer to Get Information? (S versus N)*

- If your manager prefers to deal with facts and practicalities, or with what he or she knows, sees, or hears, then your manager's preference is for sensing (this is denoted by the letter "S").
- If your manager prefers to deal with ideas, to look into the unknown, to generate new possibilities, or to

anticipate what isn't obvious, then your manager's preference is for intuition (or "N").

*How Does Your manager Prefer to Make Decisions? (T versus F)*

- If your manager prefers to decide on the basis of objective logic, using an analytic and detached approach, then your manager's preference is for thinking (or "T").
- If your manager prefers to make decisions based on personal beliefs or values, on the basis of how such decisions will affect people, or on what people in the team care about, then your manager's preference is for feeling (or "F").

Spend a week or so paying extra attention to the way your manager appears to gather information, ask questions, and make decisions; then try to work out his or her preference in each area. Your manager will be one of four possible pairings: ST, SF, NF, or NT. For each pairing, the strategy you use to sell usability is different:

- ST: State the facts.
- SF: Personalise the facts.
- NF: Personalise the possibilities.
- NT: State the possibilities.

## Step 3: Tailor Your Argument

So we've rehearsed some generic benefits for usability, and we have "typed" your manager. Next, we're going to tailor the benefits to turn the arguments for usability from persuasive to

compelling. Let's begin with the sensing-thinking manager, because this is the type who will be most persuaded by the traditional cost-benefit arguments.

### *ST: State the Facts*

The sensing-thinking (ST) manager likes to hear about details and facts, so focus on the nitty-gritty of your plan. He or she will want you to go over your plan step by step and will expect to hear why, logically, each step is the best approach. The ST manager will expect you to give an honest appraisal of the benefits of usability and will ask you difficult questions to test your knowledge of facts and details.

To sell usability to ST managers:

- **Be practical**. ST managers are not impressed by new ideas for their own sake. Instead, show them the practicality of your plan. "We'll run a small usability test with six participants, since all the evidence shows this will uncover 80 percent of the main usability problems."
- **Show the steps**. State your plan precisely in a numbered, step-by-step sequence. Emphasise that the techniques you will be using are tried and trusted, with proven results.
- **State the costs**. List the costs of the initiative in specific dollar amounts. For example, if your plan is to run a usability test, draw up a detailed shopping list showing the costs of laboratory hire, the amount participants will be paid, and any consultant day rates.
- **State the benefits**. List the likely benefits in specific dollar amounts. For example, if the goal of the testing is call centre deflection, specifically show how much is

likely to be saved. Rather than say, "I estimate we'll save about $30,000 in reduced support," say, "We have 3,000 customers and I'd expect this initiative to eliminate two calls per year from each of the 10 percent of users who experience the problem. The average call to our help desk costs us $45 to service, so this means we should save 3,000 customers x 10 percent x two calls x $45, or $27,000 per year." Be prepared to justify and defend all of your assumptions with back-up material.

- **Objectify your plan**. Use impersonal words (the participants, not our customers) and keep your language concise and businesslike.

### *SF: Personalise the Facts*

Sensing-feeling (SF) managers will also want to focus on the details, but, in contrast to STs, they will be more interested in how the details will affect the people around them. SFs value personal loyalty, so they will expect your usability plan to be tailored to this value.

To sell usability to SF managers:

- **Get personal**. SF managers want to know how the details of your plan will affect people. So think about the people on your team who will be affected by the initiative and how you plan to manage the effects. For example, "Phil [the developer] has already said he wants to attend the test sessions to see what needs fixing," or "This is a great development opportunity for Karen since she's been asking to see the details of how customers work with our system for some time." Make sure you anticipate and deal with any potential interpersonal conflict.

- **Use personal words**. For example, "How do you feel about this plan?" Identify the specific people who will help by name; for example, don't talk about "the test administrator" but instead say, "Karen will run the test sessions."
- **Bring the experience to life**. If you have access to a highlights video, or to any kind of experience that allows your manager to see how people are involved in usability activities, then demonstrate it. If you can get your manager out of the office to experience some real usability activities, even better.
- **Make a strong emotional appeal**. Do you have any letters or e-mails from customers ranting about a usability-related problem? Or any phone recordings of customer complaints? Or, best of all, usability test footage of a customer complaining about the interface? The SF manager will find such examples very persuasive.
- **Include your manager in the picture**. Emphasise the social details. For example, "Would you like to meet our customers and talk about their experiences after the test?" And why not hold your initial discussions over coffee?

### *NF: Personalise the Possibilities*

Intuitive-feeling (NF) managers are less interested in details. They think in terms of the big picture and will want you to focus on the implications of your plan, especially on how it will impact people. NFs are idealists who want to make a difference in the world, so show how your usability plan will do this. Of

the four types, NF managers are the ones who will be least convinced by the traditional cost-benefit argument.

To sell usability to NF managers:

- **Describe the "big idea"**. Usability may not cure world hunger, but it is still a field of human endeavour that can make the world a better place. A well-designed, engaging interface can make people's lives easier, less stressful, and more fulfilled. Relate this appeal back to your specific customers and describe how your usability initiative will help them work better and smarter.
- **Get prepared for a nonlinear discussion**. NF managers will appear to flit from idea to idea, and it may be hard for you to divine the connection behind their thoughts. Don't insist on their following the logic of your plan. Instead, do your best to support their way of thinking by discussing each new idea as it comes up.
- **Paint a picture**. Describe the future state of the world once the work has been completed. For example: "Once we've completed the work, we will become the centre of excellence for usability in the company. This will allow us to have much greater impact on product development and help get the senior management team engaged in our work."
- **Avoid conflict**. Identify the people who are likely to be affected by your plan and demonstrate how you will get them on your side. Even better, bring along a coworker who supports the plan to demonstrate how your plan has consensus. Better still, show how carrying out usability work actually avoids conflict: "By doing this work now, we'll head off criticism and complaints later."

- **Emphasise the team**. Talk about the team you will use, and how people will be involved. Use personalised language, such as "our team," "our customers," "our initiative."

### *NT: State the Possibilities*

Like NFs, intuitive-thinking (NT) managers will want you to focus on the big picture. But in contrast to NFs, NTs are less interested on the impact on people and more interested in the logical options that flow from these big-picture possibilities. NTs will demand that your plan be well thought through and cogently presented; you will need to demonstrate competence and credibility.

To sell usability to NT managers:

- **Present a customised solution**. NT managers think of themselves and their teams as unique. So show how the usability plan takes advantage of this uniqueness to create the best possible solution. For example: "The team is uniquely placed to carry out this work. The office location gives us easy access to customers, there's no one as good as Sam for quickly developing prototypes, and Jenny is perfect when dealing with people."
- **Describe the process**. Unlike ST managers, who want you to step through the details, NT managers want to hear about the big picture. So discuss user-centred design in the abstract and show where your usability activity fits in with other user-centred activities you could carry out.

- **Project into the future**. Talk about the big-picture benefits: higher revenues, loyal customers, improved brand value, and process improvement. "By identifying the top three usability issues with the checkout process, we will massively reduce the number of abandoned shopping carts."
- **Talk about the pros and cons**. NT managers have more than a passing resemblance to Spock from Star Trek, so logic rules. "On the downside, we'll probably end up identifying far more problems than we can solve before the next release."
- **Involve your manager in the solution**. NT managers love solving a problem, so invite them to provide a solution. For example, as a follow-up to the previous statement, you could ask, "How do you think we should prioritise the problems?"
- **Hear "tests" as interest**. NT managers will pepper their conversation with direct questions about your plan. For example, when they ask seemingly rhetorical questions like, "How can you get valid data from just six customers?" or say, "Users don't know what they want!" they are really just asking to hear what you think. So don't take tough questions as criticism, but as interest.

## Conclusions

I asked a few colleagues to review an early draft of this article, and one of them commented, "Won't this article just teach readers how to manipulate their manager and give them an unfair advantage?" It's certainly true that using an MBTI

approach will help you find a spin for your usability initiative that will appeal to your manager. But this is not manipulation. It's simply helping you see the world through your manager's eyes. In fact, it's just like usability: You're not communicating effectively unless you're speaking the right language. Use the steps outlined in this article to craft your message to fit the user — your manager.

# How to design like Leonardo da Vinci

*David Travis*

**Trying to recruit a single individual with all of the skills needed to create great user experiences is like trying to hire a modern-day Leonardo da Vinci. A better strategy is to build a multidisciplinary team with people specialised in the following areas: Management, Research, Information Architecture, Information Design, Visual Design, Technical Writing and Prototyping.**

## Specialists and Generalists

Last month I came across someone who described herself as an 'international expert on email management'. As well as making me feel a little old — this job title never existed when I was at school — it also got me thinking about the profound specialisms that we work in nowadays. Our job titles and the jobs themselves are getting increasingly siloed.

Yet at the same time, I often hear from organisations that seem to want to recruit a designer with the breadth of expertise of a Leonardo da Vinci. They want to recruit a genius designer who can create a user experience vision, carry out effective field visits, create personas the design team will believe in, identify the critical tasks for the system, set usability metrics to drive development, create paper prototypes, design and layout the screens so they are both beautiful and easy to use, and with a

final flourish, prove it by running a usability test, analysing the results and wowing people with the data.

## The need for multidisciplinary design

Here's a simple truth: great design is multidisciplinary. This is recognised by no less an authority than the International Organization for Standardization. The standard ISO 9241-210 describes 6 key principles that will ensure your design is user centred:

- The design is based upon an explicit understanding of users, tasks and environments.
- Users are involved throughout design and development.
- The design is driven and refined by user-centred evaluation.
- The process is iterative.
- The design addresses the whole user experience.
- The design team includes multidisciplinary skills and perspectives.

All of these principles are important, but I want to turn to that final principle: "The design team includes multidisciplinary skills and perspectives." This clearly contradicts the misconception that great user interface designs emerge from the brain of a single, genius designer. Instead, you need a team with diverse skills and perspectives.

Interestingly, I've found that many companies pride themselves in having what they refer to as multi-disciplinary teams but give no consideration to the roles or to the balance. Their user experience "team" is just an assortment of skills and

backgrounds. So what are the appropriate roles in a user experience team?

## Roles in a user experience team

Anyone who has worked in the field of user experience will know that there is a dizzying array of job titles. I've looked at various sources including job advertisements, surveys by professional bodies, and I even carried out a poll with user experience people on Twitter. The variety of job titles demonstrated that job titles aren't much use in deciding on the skills needed for a UX team.

What about the skills required for a multidisciplinary user experience team? Based on my experience, I'd say these are:

- Management.
- Research.
- Information Architecture.
- Interaction Design.
- Visual Design.
- Technical Writing.
- Prototyping.

Let's take a look at each of these in turn.

### *Management*

> Motto: "Design is so critical it should be on the agenda of every meeting in every single department" — Tom Peters.

Genius designers can manage themselves, but with a multidisciplinary team someone needs to provide leadership,

set direction and manage work. Whether he or she gets the job title 'Chief', 'Lead', 'Principal' or 'Head' this is essentially a management role. It's unlikely this person will do many user experience activities, although this person certainly needs to be qualified to review the work of the people on the team. Typically, the day-to-day activities in this role are to plan and schedule work, assemble team members for a project, liaise with stakeholders and manage client expectations.

### *Research*

> Motto: "Supposing is good, but finding out is better" — Mark Twain.

Genius designers have an intuitive understanding of their users but the multidisciplinary team needs a user researcher to provide this insight. These people carry out research, both before the product is designed and during design. All user interface designs need to be grounded in these research findings and need to be tested out with the intended user group. Typically, the day-to-day activities in this role are to plan, execute, log, analyse and present data from field visits and usability tests.

### *Information architect*

> Motto: "Our understanding of the world is largely determined by our ability to organise information" — Louis Rosenfeld & Peter Morville.

Genius designers just know how their users think about the system but the multidisciplinary team relies on an information architect to provide this knowledge. Information architects peer inside users' heads and understand their mental model of the world. For example, do users think of the domain in terms of

objects, tools, subject categories, actions or tasks? Whether you're designing a web site or word processor, there will be content, functions and features that need to be understood, organised, structured and labelled. Typically, the day-to-day activities in this role are to build the conceptual model and to structure, manage, organise and label functions, features and content.

## *Interaction design*

> Motto: "Design is not just what it looks like and feels like. Design is how it works" — Steve Jobs.

Genius designers are intuitively aware of the best user interface patterns to use for an application. The multidisciplinary team turns to the interaction designer for these ideas. Wizards, Organiser Workspaces, Carousels and Lazy Registration are just a few of the patterns they may call upon. They also understand the grammar of user interface design: when to use a hyperlink versus a button and when to use a check box versus a radio button. And with the increasing use of mobile devices, they know how to devise intuitive interactions to support tasks like scrolling and zooming on small displays. Typically, the day-to-day activities in this role are to define the behaviour of a system and communicate how the user interface will behave.

## *Visual design*

> Motto: "The details are not the details. They make the design" — Charles Eames.

The genius designer has a perfect eye for a design that balances beauty and communication. The multidisciplinary team calls upon a visual designer to provide this skill. With the

ability to switch between the global design of a page and pore over the fine detail, the visual designer knows what to align with what in an interface and understands how best to use techniques like contrast and proximity to group and segregate items in a display. Typically, the day-to-day activities in this role are to devise grids, lay out pages, choose colour palettes and develop icons.

### *Technical writing*

> Motto: "I try to leave out the parts that people skip" — Elmore Leonard.

Along with their visual communication skills, genius designers can write as crisply as Ernest Hemmingway. Multidisciplinary teams turn instead to a technical writer. Technical writers (or copywriters) know how to express complex ideas concisely and are just as comfortable curating hundreds of pages in a web site as they are with writing content for a single page, or even a string of help text on an application form. Typically, the day-to-day activities in this role are to create and edit macro- and micro-copy and to promote concise communication.

### *Prototyping*

> Motto: "To pretend, I actually do the thing: I have therefore only pretended to pretend" — Jacques Derrida.

Genius designers have no problem in creating interactive visualisations, demonstrations and prototypes showing how the system will be used. Multidisciplinary design teams turn instead to a prototyping expert. Happy to work with paper in the early stages of design and with electronic tools in the later

stages, prototypers bring to life the work of all the other members of the team. The day-to-day activities in this role are to translate ideas into interactions by developing prototypes and simulations.

## A useful hiring question

One manager who took our Twitter poll told me: "I find it confusing that not only does everyone I know have different job titles — from UX Designer, to Usability Lead, and my own Senior Usability Engineer — but they all tend to be the same type of job role. Many people applying for roles in my team do not have a clue about usability even though they have been working in the industry for years!" A useful interview question that hiring managers can ask is to show candidates the list of roles above and simply ask: "Which of these roles do you fit?" As well as clearing away the fog that seems to accompany many applications, you can then quiz interviewees on how their skills map to the role they claim to fit. If they can't identify with one of the roles, you know they're probably not suitable for any job in your team.

## From genius design to multidisciplinary design

Acknowledged as a brilliant painter, sculptor, architect, scientist, mathematician, inventor, anatomist, cartographer, botanist and writer, Leonardo da Vinci was the prototypical Renaissance man. Your chances of recruiting someone like this are very low. If instead you focus on recruiting a multidisciplinary team with individuals who can tick one of these boxes, you'll get much closer to designing like Leonardo da Vinci.

# Credit-Crunch Usability: 10 ways to maximise your usability budget

*Philip Hodgson*

**Being frugal during economic hard times is good business practice. So how can you squeeze your usability budget and still deliver great insights? These 10 suggestions for streamlining your usability efforts explode the myth that usability is expensive and time-consuming.**

## 1. Fix the basics

Focus your efforts and resources on simplifying the routes to the users' key goals: the Red Routes. All products and systems have these critical user journeys. With a limited budget, don't waste money on secondary tasks or on edge-cases. Focus on the main goals that the user is trying to achieve and simplify the steps to get there.

## 2. Learn to love paper

Create paper prototypes very early in the design stages — before any coding takes place. These paper interfaces will show the key screens and controls needed to complete tasks, and you can quickly test them by having participants touch controls with their finger, rather than a mouse, to trigger screen changes. A human "computer" switches the screen views in

real time. This approach requires zero coding effort, and you can easily make changes on the fly, so your designs can go through a number of iterations in a short amount of time.

## 3. Test with fewer users

One reason usability testing provides such high ROI is that most usability problems can be detected by testing with very few participants. You don't need to see 10 people fall into a pothole to know that you have a pothole that needs fixing. Just a handful of participants will help you spot a raft of usability issues, so test with a handful, make design changes and test again.

## 4. Shelve the 1-way mirror

A plush test facility with a 1-way mirror is a luxury for most usability tests. You can cut it from your budget with zero impact on the quality of the data you collect. All you need for a usability test is a quiet room in your office. If you want to test away from base, rent a hotel meeting room for £150 rather than a test facility for £600. To keep the development team engaged, use a screen-sharing service like GoToMeeting so observers can watch the test from the office.

## 5. Run a test from your desk

Save money, time and travel costs by conducting usability tests remotely. The design and structure of remote tests is similar to face-to-face tests, but participants carry out the test from their own home or office. Use a phone to talk with participants and screen-sharing software to see their screen (once again, the development team can drop in and observe

from their desks). If you want larger samples, conduct an automated, unmoderated test for a fraction of the cost of a face-to-face test.

## 6. Get out of the office

Your users are everywhere. Here are four ways to engage them:

### *Test in a café*

If you want user feedback on a web site or software application that is intended for use by a broad audience, camp out in Starbucks — or somewhere else where you can get free Wi-Fi — and put up a discrete sign that says "Free Cappuccino for 15 minutes of your time!" Get each participant to carry out a couple of tasks, and rotate your tasks to ensure you get full coverage.

### *Go where your users congregate*

For example, if you're developing a mobile phone handset, stand outside a mobile phone store and intercept customers for a 10-minute interview. Ask them about their phone, the way they typically use it, and what issues they encounter. Field visits are cheap to carry out and give great insights into user behaviour.

### *Create an electronic diary*

Ask people to take photographs whenever they interact with your product, or a competitor's. Ask people to pay particular attention to when things go well, and when they don't. Then get people to post their photos to your account on flickr along

with a short commentary (use flickr's privacy settings to keep the images confidential).

### *Use the trunk test*

In his brilliant book, Don't Make Me Think, Steve Krug recommends the Trunk Test as a way to test people's ability to navigate your system's interface. It's analogous to being blindfolded and put in the boot of a car, driven around town, then being dumped out at some random spot. Print out a few random pages from your web site, or some screens from your interface, and ask passers-by to answer these questions as quickly as possible:

- What site (or system) is this?
- What page (or screen) are you on?
- What are the major sections of the interface?
- What options do you have at this level?
- Where are you in the system?
- How would you get back to the Home page (or Start screen)?

## 7. Eradicate pre-test bloopers with expert reviews

Get your internal team to carry out an expert usability review of your product or system where 3-4 usability experts apply a set of best-practice checkpoints and heuristics to an interface. This method is inexpensive and provides a rich source of actionable data. Expert reviews save money because they will identify the usability problems that will stall a test with real users. After these are fixed, your test will uncover the deeper issues that are unique to the way your customers work.

## 8. Create your own participant pool

Recruiting participants costs around £1000 for a typical study. Slash these costs by building your own participant pool. With just 200 people you won't run the risk of testing with the same people every time. Work with marketing, sales and customer support to identify potential volunteers. Consider adding a check box to your registration material so that customers can indicate their willingness to sign up and design future products.

## 9. Skip the pointless test

Tests should be conducted only if you have the opportunity to make design changes. Many projects have a usability test scheduled so late in the design cycle that few, if any, problems can be fixed. This is a waste of time and money. Reschedule the test or cut it.

## 10. Learn how to fish

You know the Lao Tzu proverb: "Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime". Providing usability training is a smart way to spend a limited budget. Train your designers and engineers in the basics of usability so that they learn tools and techniques they can apply themselves. In-house usability training is particularly cost-effective, and you can invite members from other disciplines within your company. This can serve to build bridges between development groups and can provide a company with a common vocabulary to aid group communication. If you want everyone to be on the same page — usability is the page to be on.

# A Business Case for Usability

*David Travis*

**Until usability gets embedded in the processes of your company, you'll probably find you need to justify the investment. Fortunately, usability initiatives deliver a major return on investment: it's not unusual for usability projects to return benefits of 5-10 times their cost in the first year alone.**

The key benefits of usability are:

- Higher revenues through increased sales
- Increased user efficiency
- Reduced development costs
- Reduced support costs

## Higher revenues through increased sales

Because usability initiatives focus on customer goals, they increase both online and offline sales.

Usability boosts online sales in the following ways.

- Usability initiatives like contextual inquiry and usability testing help identify the information customers need to complete the sale — as well as potential sales obstacles like shipping costs and ease of product returns.
  Usability research firm User Interface Engineering found

that when consumers were given money to shop at well-known sites, 70% of their shopping attempts ended in failure. Because of poor site design, consumers just couldn't find what they were looking for.

- In contrast, usability techniques like card sorting help design an intuitive navigation system. This means customers can find the products that they want to buy, increasing sales.
- By making it easy for customers to achieve their goals, customers will return and buy from you again. According to Forrester Research, 42% of US Web buying consumers made their most recent online purchase because of a previous good experience with the retailer. A focus on customer goals will also identify the right products to offer for cross-selling, further increasing sales.
- By providing a great user experience, customers are more likely to recommend the site to other people - and they are less likely to complain. Jeff Bezos, founder of Amazon, once said: "If you have an unhappy customer on the Internet, he doesn't tell his six friends, he tells his 6,000 friends". (Last month, Bezos's prediction was put to the test when a dissatisfied student launched a Facebook group called "Stop the Great HSBC Graduate Rip-off!". The group quickly grew to over 5,000 members and they succeeded in forcing HSBC to reverse its decision to axe interest-free graduate overdrafts).

If you make physical products or sell a service, usability boosts offline sales too.

- As consumers begin to demand iPod-simplicity in all of the technology they use, a usable product is easier to demonstrate and sell, which provides you with a competitive edge.
- Once you get a reputation for usable products, customers become loyal. Loyal customers generate repeat business, demonstrate immunity to the competition, provide higher margins and are less price sensitive.
- When consumer groups or industry magazines review your product, usability is now one of their standard evaluation categories. Focussing on usability during development ensures that this is at least one area where your product will shine.

## Increased user efficiency

People use products and web sites to achieve a goal and then to get on with their life. Few people want to spend their day navigating your web site for buried content. Nowhere is this more relevant than with company intranets. Jakob Nielsen has estimated that improving intranet usability would save the world economy $1.3 trillion per year.

Companies benefit from easier to use systems, like intranets, in the following ways.

- By helping employees work faster, they become more productive. The financial benefit of this should not be underestimated. For example, by reducing the time spent choosing the right option from your company's Intranet home page by just 1 minute per day, a typical company with 5,000 employees could achieve £0.25m

year in efficiency savings. (Calculated assuming a weighted hourly salary cost of £15 and assuming that the average employee works 200 days per year).

- A focus on usability means that new recruits will quickly learn how to carry out common tasks and all employees will learn how to use new functions more quickly. Further savings arise from the fact that novices will not have to bother experienced staff for assistance when using the system.
- An Intranet tailored to the way employees work will reduce the number of errors made, for example when entering data in forms. This means fewer errors will need to be corrected later. This aphorism illustrates that improved efficiency also benefits e-commerce sites and physical products:

  > "The world is divided into two kinds of people: those who spend a great deal of time trying to save money, and those who spend a great deal of money trying to save time." — Peter Cochrane.

- By providing a speedy sign in process and storing address, shipping and credit card details, you make it easy for customers to purchase from you again — even when customers can get it cheaper elsewhere. Amazon appreciated this a decade ago when they decided to patent their one-click purchase process and they have since vigorously defended their patent.
- Improving efficiency also improves usage. For example, human factors firm HFI used usability methods to improve a recruitment web site for civil servants and made it 12 times faster to find a job. This redesign also

boosted the percentage of people that could successfully find a job from 30% to 100%.

- Products that are quick to learn require less instruction, reducing customers' cost of ownership and their investment in training.

## Reduced development costs

With any new product or web site, development costs are always responsible for the biggest slice of the cake. Usability initiatives reduce development costs considerably, because:

- Focussing on what users want to do, rather than designing a product that does everything for everyone, helps you avoid featuritis. This means you spend time coding only those features that will be used.
- Involving users early in the design process helps you detect and fix usability problems early in design. Once a problem has become hard-coded, changes can cost 60-100 times as much as in the early phases of development, so it makes sense to trap these problems early.
- Creating testable user experience requirements ensures that the development efforts are targeted on business critical metrics like conversion rate, rather than soft goals like "update the look-and-feel" or "make the site simpler."
- Usability testing identifies the flaws in a product, which can then be fixed prior to release, reducing the risk of product failure.

- An iterative design approach (design-test-redesign-retest) helps you get it "right first time" and so avoids the need to re-work the design after release. 80% of software re-writes are due to the fact that important functionality was missed the first time.
- Having data that shows how real users interact with the product means that you can manage and reduce risk, for example by helping you prioritise features.

## Reduced support costs

Companies benefit from reduced support and maintenance costs in the following ways:

- A product or web site that is intuitive to use means that documentation can be eliminated or at least minimised.
- Usability testing will flush out the uncertainties customers have about a product, which can then be addressed in the page content (for a web site) or the packaging (for a product). Providing a fix for these problems means that customers will not have to call or email customer support with simple questions about the product.
- A product that is simple to set up is less likely to be returned. For example, research shows that over 60% of mobile phones returned as faulty turn out to be working perfectly — the returns are wholly due to usability problems with the handsets. (This costs the mobile industry in the UK over £54m per annum).

## How to apply this to your own situation

Although we don't recommend you use cost-benefit arguments as your only method of persuading managers about usability they nevertheless have their place. Cherry-pick the items from this article that are most relevant to your situation. Then use them to create a business case for usability within your own company. Use it as a framework for an internal presentation or to persuade your boss that an investment in usability makes business sense.

# Two measures that will justify any design change

*David Travis*

**Two measures commonly taken in a usability test — success rate and time on task — are the critical numbers you need to prove the benefits of almost any potential design change. These values can be re-expressed in the language that managers understand: the expected financial benefit.**

We've known for some time that usability improvements can have a massive effect on the bottom line, so what stops usability professionals from actually measuring the return on investment of their work?

Is it because they think the benefit of a usability-induced change is obvious, so there's no need to measure anything?

If so, then they're taking a risk. The development team is unlikely to share their vision of "obviousness". The project manager may push back, claiming that the change is too difficult to implement, that it will need to wait for the next release, or that "user satisfaction" isn't as important as selling more product.

Or is it that they can't be bothered — perhaps because return on investment calculations aren't the only way to sell usability to your manager.

Again, they are missing an opportunity. There is something uniquely persuasive about being able to prove that a design change can make or save the company money — especially in the current economic climate.

Or is it simply because people think the computations are too difficult?

In fact, using 2 common measures from usability tests, the calculations are easy enough to do with a paper and pencil.

## When a 5% improvement in completion rate is worth £7 million

Success rate is the most important usability measure with an e-commerce site: how many users can complete the task?

Let's say you carry out a large sample, benchmark usability test of an e-commerce web site. You find that 70% of your sample manages to complete the task successfully.

By making design changes to the web site, we should be able to improve this figure. Usability improvements invariably have a dramatic effect on improving success rates, but for argument's sake, let's assume we can improve the success rate by a measly 5%, making the new success rate 75%. Most usability professionals would bet their house that they could make at least that improvement.

**How much is that 5% improvement worth?**

We can do a simple calculation using this equation:

Sales = Success Rate x Potential Sales

"Sales" is the actual turnover of the e-commerce site. "Success Rate" is the figure we're about to improve. "Potential

Sales" is the amount of sales we would make if every user could complete the task.

At this point, we need to know the sales of the e-commerce site. Let's assume it's £100m per annum. (For most serious e-commerce outfits, this is a conservative figure. A high street store like John Lewis in Oxford Street takes £100 million per week. And Jared Spool describes a design change to an e-commerce site that was worth $300m per annum).

So at the moment, 70% of people manage to checkout and the sales figure is £100m. In other words:

- £100,000,000 = 70% x Potential Sales

The Potential Sales is therefore £100,000,000/70% = £142,857,142.

We think we can increase the success rate to 75%, so:

- Sales = Success Rate x Potential Sales
- Sales = 75% x £142,857,142

Which comes to £107,142,857. The difference between this figure and our original £100m is over £7m. This is how much our 5% improvement in success rate is worth.

## When improving time on task by 15 seconds is worth £1.3 million

An important measure for an intranet is time on task: how long do people take to complete a task?

A good example for an intranet would be looking up a colleague in the phone book. This is something that most intranet users do most days, often more than once per day.

What would be the cost savings of reducing the amount of time people spent on this task?

Let's assume that we've measured the time it takes an employee to find someone's email address in the Intranet address book and begin an email message with that person's name in the "To:" field. Assume it takes 60 seconds. We reckon we can reduce the time on task to 45 seconds by displaying a clickable email address alongside the employee's name in the search results.

What's the financial benefit of 15 seconds?

To do this calculation properly, we need to know how many times per day people carry out this task. Let's make the conservative assumption that people do this task once per working day on average. If your organisation employs 100,000 people that do this task and the average loaded salary is £15/hour (again, a conservative figure), we can calculate that:

- Current time on task = 45 seconds = 45/60 minutes = 45 / (60 x 60) hours = 0.0125 hours
- Daily cost of task per employee = 0.0125 hours x £15/hour = £0.1875
- Daily cost of task for all employees = £0.1875 x 100,000 employees = £18,750
- Most people work an average of 220 days per year, so the yearly cost is = £18,750 x 220 days = £4,125,000.

Now let's work out what the cost would be if we reduced the time from 45 seconds to 30 seconds. Working through the same calculations as above, we get:

- New time on task = 30 seconds = 30/60 minutes = 30 / (60 x 60) hours = 0.0083 hours

- Daily cost of task per employee = 0.0083 hours x £15 = £0.125
- Daily cost of task for all employees = £0.125 x 100,000 employees = £12,500
- The new yearly cost is = £12,500 x 220 days = £2,750,000.

The difference between the before and after figures is over £1.3 million. Not bad for a day's work.

## The easy way to make sure design changes happen

These kinds of calculation are very simple to make, so long as you have the kind of robust usability measures you get from a well-executed, large sample usability test. But when computing your own numbers, here's the golden rule: err on the conservative side. So for example, if you're not sure if all employees use the Intranet phone book, reduce the number of users to a more persuasive value.

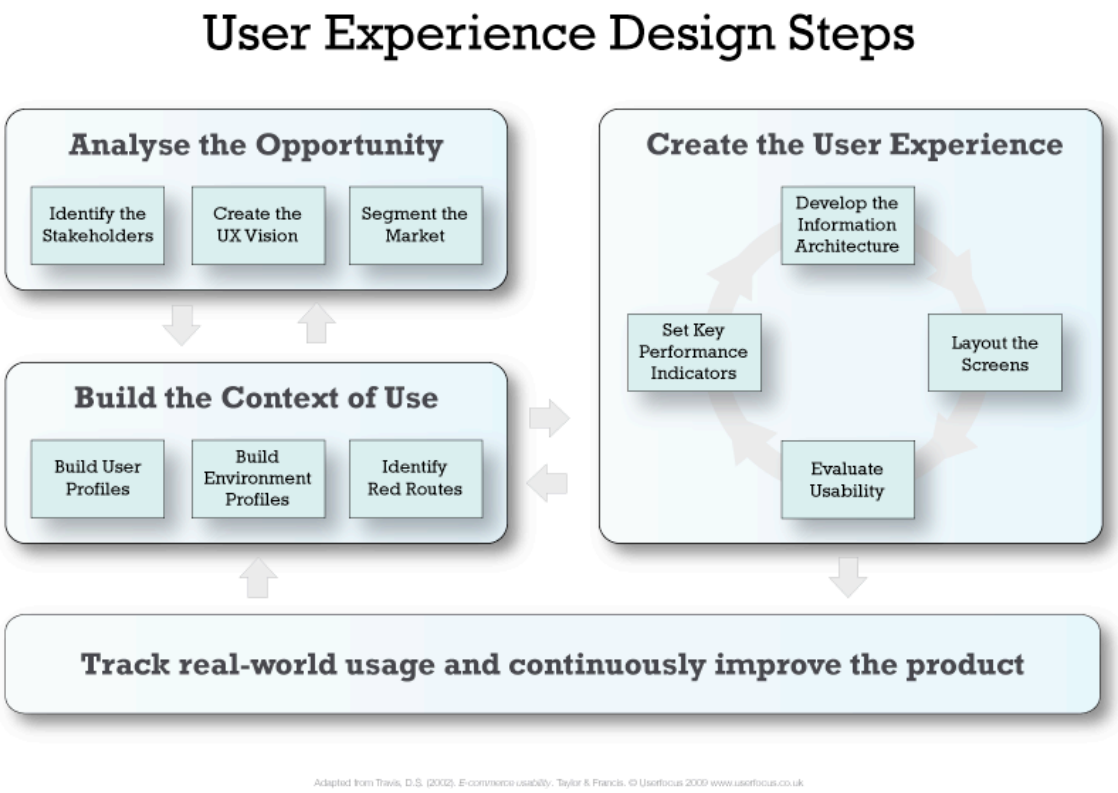
The fact is that virtually any improvement in usability will have a knock-on improvement in your organisation's bottom line — but to make sure your voice is heard, you'll need to collect the data and crunch the numbers.

# Communicating User Experience Design

*David Travis*

**When trying to communicate the process of user centred design to senior managers it helps to convey the idea as concisely as possible. This infographic conveys the various steps and phases of user centred design on a single page.**

## A model for user experience




Adapted from Travis, D.S. (2002). *E-commerce usability*. Taylor & Francis. © Userfocus 2009 www.userfocus.co.uk

The model is based on the one in my book, E-Commerce Usability. The main benefits of the model are:

- It is based on the user centred design model in the International Standard, ISO 13407 (soon to become ISO 9241-210: Human Centred Design Process for Interactive Systems).
- This approach to user centred design does not require any particular development methodology: you can apply it to projects that use Agile development techniques as well as projects that use Prince2.
- Despite being a simple diagram, it covers all of the activities carried out by user experience professionals.

The model has four main steps.

## Analyse the opportunity

This step provides the business context for the product. You begin by identifying the stakeholders for your new product development. This includes all those people who have an interest in the success or failure of the product, such as management, technical support and regulatory bodies in the industry. Next you identify your user experience vision for the product: your view of what using the product will be like 5 years or so in the future. This provides a design target that you can use to ensure you are progressing towards your design goals. The final part of this step is to segment the market for the product so you can identify what Geoffrey Moore calls 'a beachhead segment' that will become the focus of your design solution.

Common user experience activities during this step include:

- Stakeholder analysis.
- Competitor analysis.

- Surveys.
- Focus groups.

## Build the context of use

In this step, you aim to build a rich description of customers, the environment in which they use the product and the critical tasks they want to carry out with it. You begin by building user profiles: a set of personas that describe the goals and behaviours of the product's key user groups. Next, you create environment profiles: descriptions of the social, technical and physical environment within which the product will be used. Finally, you identify red routes: a list of the critical tasks that users need to easily carry out with the product for it to be a success.

Common user experience activities during this step include:

- Contextual inquiry.
- User interviews.
- Task analysis.
- User diaries.
- Critical incident analysis.

## Create the user experience

This step is an iterative process. You start the process by developing key performance indicators for the product: quantitative measures, based on key customer and business requirements, that the management team use to determine if the product is ready to launch. You then move on to develop the information architecture: the high-level, conceptual model of the product, showing how all of the product's functions and

features will hang together. Next, you lay out the screens (the detailed design), starting with paper sketches and then moving onto wireframes and interactive prototypes. The final part of this step is to evaluate usability by asking potential customers to carry out realistic tasks.

Common user experience activities during this step include:

- Setting usability metrics.
- Card sorting.
- Paper and electronic prototyping.
- Wireframing.
- Usability testing and expert reviews.

## Track real world usage and continuously improve the product

To paraphrase Winston Churchill: this is not the end. It is not even the beginning of the end. This is the end of the beginning. In this step you find out how your product was actually used in practice and use these insights to drive the next release of the product or to design a future product.

Common user experience activities during this step include:

- Site visits.
- Remote evaluation.
- Usage logs.
- Analysis of support calls.

## Try it for size

We've found that senior managers love this concise description of user experience activities. Next time you're called upon to explain what it is, exactly, that you do, try using this as a framework.

# Making usability metrics count

*Philip Hodgson*

**In spite of a proliferation of books, articles and blogs explaining how to measure usability, few companies seem to put their usability metrics to good use. In this article we show how you can link the numbers from usability tests to the numbers that steer business decisions — and in the process, influence your company's business.**

## Numbers for numbers' sake?

When I was about 10 I used to sit by the side of the road with a small notebook and pencil and write down the license plate numbers of passing cars. I can still remember some of them: SVY673 and XDN210 spring readily to mind, and MDT20 was a particular favourite. Usually as I was writing down one number, ten more would whizz by unnoticed, but I didn't care. It was a good way of passing time and it felt important. It was also perfectly pointless.

I didn't realise it at the time, but the same approach to data collection exists in the adult world, too. Soon after a company discovers the value of usability, it wants to start measuring it. Over time, UX teams gather a sizeable body of metrics and begin to feel important — but these measurements are rarely, if ever, used for anything related to the business and they seldom

seem to surface in design meetings or drive development decisions.

Has the exercise of writing down usability numbers become perfectly pointless too?

## How to link stats to business metrics

Let's step back for a moment and look at why most organisations measure stuff.

C-level managers use numbers because they have predictive value. For example, I may notice that when the number of people entering my store increases (at Christmas, say), so does the number of sales I make. So if I can increase the number of shoppers at other times of the year — for example, by advertising — I would expect that to lead to an increase in sales and profit. "Footfall" becomes a coincident metric that I can use to predict profit.

Most companies have no shortage of metrics relating to the success and failure of their products. They have sales figures, service incident rates, customer loyalty indicators, product return rates, customer support call-centre volumes, 'customer instruct' rates and so on.

These are useful metrics, but they all suffer from the same problem: they are so-called 'lagging' indicators. You can obtain these metrics only after you have launched the product — and sometimes long after the launch date. This is fine if the figures are strong, but if your product is failing, this is too late to find out about it. All you can focus on then is costly damage limitation via retroactive fixes, additional call-centre agents, and product replacements or, in some cases, a product recall.

What businesses need is a 'leading' indicator: a metric that can predict product success or failure before the product has been released. That's where usability measurements come in.

## Step 1: Measure usability

The international usability standard, ISO 9241, contains a definition of usability that we can use to operationalise and measure usability. I've written about this elsewhere, but briefly we need to measure the effectiveness and efficiency of a system (both can be measured objectively) and include a measure of user satisfaction (a subjective measure).

You need to measure these three components of usability for each red route, and then the results can be combined across tasks to give an overall measure of effectiveness, efficiency and satisfaction. Finally, you can aggregate the three measures into a single metric for usability.

When arriving at your single usability metric, you may want to weight one of your usability measures more highly than the others. For example, for a museum kiosk, effectiveness might be the most important of the three measures. For an intranet, efficiency might be the most important measure. And for a game on an iPhone you might want to make satisfaction the most important measure. The point is that although you need to collect all three measures to get a fully rounded picture of usability, it's OK to prioritise one of the measures over the others in coming up with your single usability metric.

## Step 2: Correlate your UX metric with business metrics

In this step, you need to work out the predictive value of your metric. There's a slow way of doing this and a fast way.

The slow way is to gradually build up a database of usability metrics for your products, wait for them to be released and then afterwards examine the business metrics associated with the product, like return rate and calls to customer support. Depending on your product, this might take months at best and could even take years.

The quicker way is to run some usability tests of your products that are already in the market place. I'd suggest picking three products, one with (say) a high volume of calls to customer support; one with a 'typical' volume of calls; and one with a lower-than-average volume of calls. Run a usability test of each product with about 20 participants and calculate the single usability metric for each one. You now have three data points you can use to predict call volume from a usability metric.

## Step 3: Start predicting product success and failures

As your body of data increases you will be able to correlate usability metrics with business metrics and start to make predictions about the likely success of a product. You will be able to step up in a business meeting and say things like this: "Our new product has a usability metric of 53%. If we launch it now we can expect to see a customer satisfaction rate of only 40% and a return rate of 25%. In addition, the customer support agents are likely to see a 20% increase in call volume. Are we sure we want to risk this?"

## User experience is about more than numbers

Paul Brodeur has written, "Statistics are human beings with the tears wiped off". The same could be said for usability

measurements. I'd be the first to confess that these numbers capture only one aspect of the user experience — but it's an aspect that we can use to provide real business value and to ensure that user experience has a voice at the business table. It's not only about numbers, but numbers are certainly part of what we do. And if we're going to collect numbers, we owe it to ourselves to do something useful with them, and not simply write down the license plates of passing cars.

# What makes a great UX practitioner? Hint: It's not what you think

*David Travis*

**Most of the work on user experience (UX) competency focuses on an individual's ability to show evidence of technical skills. But technical skill is just one sphere of expertise required by UX practitioners. A fully-rounded UX practitioner also needs competence in two additional spheres of practice: process and marketing.**

## My consultancy journey

Many years ago when I was working as a post doc at York University, I made a rare appearance in the media. I was studying the effects of multiple sclerosis on colour deficiency with a view to creating a diagnostic test. BBC Radio York heard about this and asked me to bring in one of my tests and talk about the research on air.

I'm not sure that it made good radio, but armed with the Farnsworth-Munsell 100-hue test I demonstrated colour vision testing to an Alan Partridge-type daytime radio DJ in between breaks from 80s pop hits.

After my 5-minutes of fame, a local businessman contacted me and asked if I would visit him to discuss the colour coding used on fire extinguishers in his company. I'd always harboured an interest in consultancy and thought this might be

a great way to supplement a meagre post doc salary. I attended my first sales meeting with a certain amount of trepidation but the meeting must have gone well as I won my first consultancy project.

It may have been just two days of work, but I learnt an important lesson from this assignment.

**Lesson 1: It's a lot easier to sell consultancy to clients if they have a personal interest in your work.** Because it turned out that my first client was colour blind — and I suspect he was more interested in me assessing his colour vision on company time than in the detailed report I wrote on colour coding in fire extinguishers.

A few years later, I learnt a second important lesson about consultancy.

I had started my career in human factors proper at BT Labs in Ipswich. During that period, I remember coming across various 'one man band' consultants. I was impressed that these consultants were providing practical, human factors advice to large UK companies and even more impressed that the companies appeared to be acting on their advice.

But if I'm honest, I was also indignant.

I felt that a lot of these consultants had simply pulled the wool over the eyes of their clients because they didn't have a PhD like I did.

I felt that their technical skills were rudimentary at best.

I felt envious because I thought I knew much more about human factors than they did, yet they were the ones making a go of it as consultants.

Until then, I had thought that consultancy was about big companies asking bright people to distil their knowledge into simple words that the company could then act on and exploit. In this view of consultancy, technical competence is everything.

But my experience was telling me something different. Although it took me a few more years to articulate it, I learnt Lesson 2: Technical expertise is a small component in making user experience happen. Technical expertise is what gets you in the door, but it's not what makes a great practitioner.

To make the point more directly, let's take a consultancy activity with which we're all familiar: a visit to a medical professional. Clearly, when you visit medics you want to know that they have passed all their exams and are competent to dispense advice on illness. This is what gets a medic in the door (or you in the consulting room).

Now think back over the medical professionals you've met in your life and work out which one you think was best. The chances are that your decision won't be based on the technical expertise or qualifications of the individual. My favourite was a very amenable GP: he seemed to take time to explain stuff to me and he spoke to me as an individual, not as a 'patient'. He had a great 'bedside manner', if you like.

User experience professionals have a bedside manner, too. And it's the bedside manner that's missing from most of the current discussions around user experience competency. Technical expertise, although important, is not enough. We need to consider three spheres of user experience practice:

- Technical skills.
- Process skills.

- Marketing skills.

## The first sphere of practice: Technical

Any professional person needs a core set of technical skills, and the field of user experience is no exception. The UXPA say that a usability professional should demonstrate five competencies:

- Plan and manage the human-centered design process.
- Understand and specify user and organisational requirements and context of use.
- Produce design solutions.
- Evaluate designs against usability requirements.
- Demonstrate professional skills.

This is a robust framework, given that the first four of these competencies is based on the structure of ISO 9241-210. At a more specific level, Jared Spool identifies eight core skills shown by individuals in effective UX teams: Information Architecture, User Research, Visual Design, Information Design, Interaction Design, Fast Iteration Management, Copywriting and Editing. To this he also adds what he terms 'Enterprise UX skills': skills that help individuals interact with the organisation in a productive manner. This includes skills like writing documentation, and a knowledge of social networks and new technology.

Although we might argue over the detail, this sphere of user experience is well served by university courses and by the various short courses available in usability. But UX training providers do not address the two other spheres of user experience practice: process and marketing.

## The second sphere of practice: Process

Process skills are the activities a practitioner uses when managing clients and managing projects. This includes:

- Active listening.
- Helping clients implement change.
- Making appropriate ethical choices.
- Project management.

### *Active listening*

Active listening means really seeking to understand the client's problem and providing a solution that will fix it — rather than selling the client an off-the-shelf user experience activity like eye tracking that may look impressive but that doesn't address the underlying problem. This sounds easy, but when you're put on the spot as a practitioner it's tempting to simply pull out one of the tools in your box and tell the client this is what he or she needs. It's much harder to admit that you haven't understood the problem and you need to ask more questions. As part of this, it's important to understand the development world that your client really lives in — how things really work inside that company or design group. You need this information to establish the practical constraints for design change.

### *Helping clients implement change*

Helping clients implement your research insights is important because in many user experience activities, the real work begins when the activity is finished. Running a usability test will never make a web site usable. Systems get improved not by reports or by presentations but by the design team

changing the interface. So the next step after a user experience activity is to express the findings in a way that will encourage the client to take action. This doesn't mean deciding to present the results in a PowerPoint deck rather than in a 40-page Word document. There is a skill in showing clients how to fix problems, captured neatly in Steve Krug's aphorism, "When fixing problems, try to do the least you can do". Rather than redesign the interface, his suggestion is to make the simplest change that solves the problem for most people. That's the difference between an experienced consultant talking and someone taking their first steps in the field.

### *Making appropriate ethical choices*

A good consultant needs to make the right ethical choices. From some clients, the pressure to do your research a particular way can be overwhelming. In some cases, the changes may be minor: for example, the client may want you to recruit participants for a user experience activity according to strict marketing demographics, like geographical location or age ranges. We know that demographic groupings are rarely important for usability — and even when they are important the small sample sizes used in usability research render segment-related conclusions meaningless — but since the final impact on the research will be negligible, there's no need to argue every little point. The ethical issue arises when the client insists on more fundamental methodological changes that will affect the outcome of your research, such as running a focus group in place of a usability test. At this point, the good practitioner will resist the change or walk away.

### *Project management*

Good practitioners know how to manage their time and manage the projects that they work on. It's not important to know the difference between a Gantt chart and a PERT chart, but you do need to know how to estimate how long a project will take and keep the client informed if the schedule looks like it's going to slip.

## The third sphere of practice: Marketing

I've yet to meet a user experience practitioner that thinks of him or herself as working in sales. But we are, whether we like it or not. Typical marketing activities that user experience practitioners need to master include:

- Explaining the cost-benefit of usability activities.
- Formulating a proposal.
- Generating new work.
- Leaving a legacy.

### *Explaining the cost-benefit of usability activities*

We can probably all rehearse the main benefits of a focus on user experience. But a good user experience practitioner will be able to ground these examples in the client's domain. This means talking with the client to understand how success is measured and then collecting the data, or providing good estimates, to evaluate the benefits.

### *Formulating a proposal*

New user experience practitioners tend to confuse writing a proposal with creating a research plan. A research plan simply lists the steps in the project, calculates how long each one will

take and then provides an overall cost. Although this is an inevitable part of any research program, a good practitioner realises that a proposal needs much more than this because it is a sales tool. It needs to include a section that gives your client confidence that you really understand the problem to be solved and it needs to list explicitly the benefits that the client will receive as a result of the work. Formulating a proposal also includes revising your proposal based on feedback, negotiating with the client on what can and can't be changed and, when there are several bidders, pitching to the client.

### *Generating new work*

Generating new work is a necessary evil for both external and internal practitioners. To stay in a job, external consultants need to find new clients and sell more to existing clients. Similarly, internal consultants need to identify the next big enterprise project and ensure that the user experience flag gets flown on the project. There's no point having expertise if clients don't get to hear about it. Inevitably, this involves selling your skills. The notion of selling carries a lot of negative baggage, with clients wary of being 'sold' to and practitioners worrying that they won't make the sale. But by being truly client-centred and by behaving authentically, you can overcome this situation.

### *Leaving a legacy*

Practitioners need to build the business: this means growing a company (or the team you work in) and the industry as a whole. One way to achieve this is to use and contribute to the field's body of knowledge. For example, there are many good resources on the web available to you to demonstrate the benefit of usability to clients. Good practitioners add to these resources by writing online articles, publishing presentations

and encouraging people to reuse what they have created. Ultimately, you should be trying to build a legacy: to leave your company, your team and anyone you manage, stronger.

## What are the implications of the three spheres of practice?

Adopting a model based on broad spheres of practice, rather than a narrow focus on technical competencies, raises a number of implications for ensuring competence in 'process' and 'marketing' skills. These skills:

- Are not really amenable to the 'chalk and talk' style of teaching found in many University courses. So how will inexperienced practitioners develop them?
- Are harder to measure than technical skills. So how can we incorporate them in any certification scheme?
- May seem soft and woolly. So how can we persuade managers to train their staff in these areas of practice?
- Are not part of existing appraisal and reward systems for user experience practitioners. This means practitioners may be reluctant to develop them, favouring technical skills that can be more easily traded.

Given that these skills require experience and practice, University courses could include a requirement that students spend a certain amount of time in practice before they can graduate. This requirement already exists in some other postgraduate courses: for example, University courses in counselling require students to accrue a certain number of hours in counselling practice ('flying hours' acquired during their course) before they can graduate.

Another alternative is for a professional body like the UXPA to develop a 'practitioner in training' scheme to ensure that graduates in user experience develop these skills post-qualification. The disadvantage is that this requires a significant investment in infrastructure — including supervisors, log books and CPD monitoring — and given the commercial focus of our discipline I'm not sure the appetite exists to make it happen.

# About the authors

## Philip Hodgson

Dr. Philip Hodgson (@bpusability on Twitter) holds a PhD in Experimental Psychology and is a member of the Usability Professionals' Association, the Association for Psychological Science, and the Association for the Advancement of Medical Instrumentation. He has over twenty years of experience as a researcher, consultant, and trainer in product usability, user experience, human factors and experimental psychology.

## David Travis

Dr. David Travis (@userfocus on Twitter) holds a BSc and a PhD in Psychology and he is a Chartered Psychologist. He has

worked in the fields of human factors, usability and user experience since 1989 and has published two books on usability. David helps both large firms and start ups connect with their customers and bring business ideas to market.

# User Experience: The Ultimate Guide to Usability

Master user experience in this practical, video-based, online training course.

> The depth and breadth of content covered in this course is seriously impressive. All of the major UX techniques are covered in a way that anyone could take this advice and apply it to their own projects or organisation. If you want to learn how to do user-centred design, this is the course to get.
>
> *— Independent review by Matthew Magain, co-founder, UX Mastery*

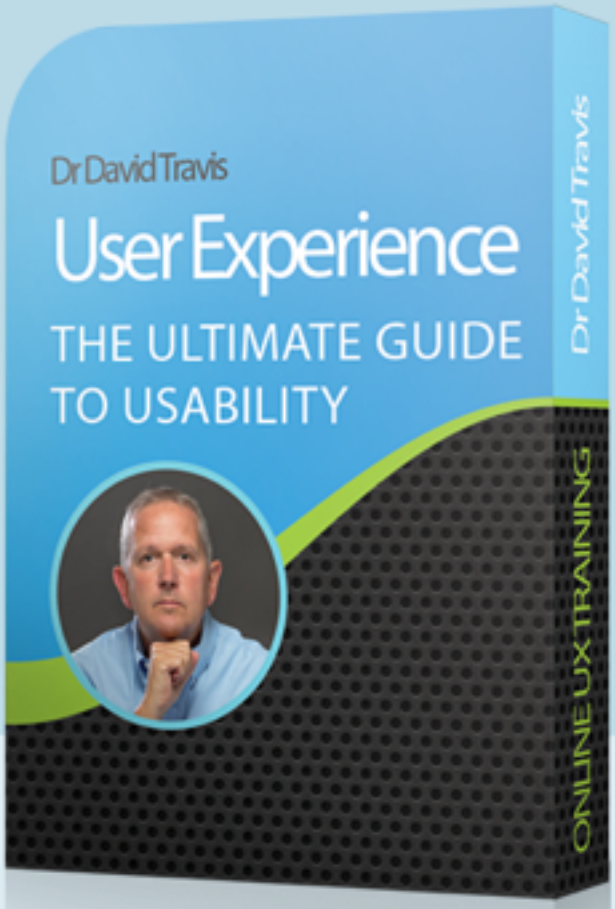
> I already had some in-house, quasi-UX mentoring, but taking this course is what truly opened my eyes to seeing everything in the world from a design and user goals perspective. I promote this course anytime I see or hear anybody asking where they should get started in UX Design/Research.
>
> *— Course review by student Geoff Wilson*

> Dr. Travis has created a very thorough, very engaging overview of the UX Lifecycle, with lots of great real world examples and war stories from his own considerable experience to illustrate the guidelines and techniques he teaches you. Well worth the time and money.
>
> *— Independent review by veteran usability consultant Dr. Deborah J. Mayhew*

**Gain hands-on practice** in all the key areas of UX — from interviewing your users through to prototyping and usability testing your designs.

**Build a UX portfolio** to boost your job prospects as you complete five real-world sample projects.

**Gain industry-recognised certification** by preparing for the BCS Foundation Certificate in User Experience.




**www.uxtraining.net**