



Certified Usable

How to certify your usability practice and your designs

A conversation with Dr. Eric Schaffer
CEO, Human Factors International



Certified Usable: How to certify your usability practice and your designs

In this conversation, Dr. Schaffer talks about this essential step for the usability engineering industry—certification of organizational capabilities for user-centered design and certification of the usability of products, applications, and web sites.

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“Some years ago we developed a usability maturity model. Now we’re using that model as a foundation for certifying the maturity of an organization’s usability practice.”

Apala Lahiri Chavan, Vice President for HFI’s Asian operations, interviews Dr. Eric Schaffer, CEO of Human Factors International (HFI) about a process he has developed to certify the usability practice within an organization, and also to certify the usability of products, applications, and sites.

Eric, what is this new certification that HFI is offering?

Some years ago we developed a usability maturity model. Now we’re using that model as a foundation for certifying the maturity of an organization’s usability practice. “Maturity” means that the organization has the right kind of executive championship, the right kind of organizational structures, the right kind of trained and certified staff, the right kind of culture, and the right kind of methodology, standards, and tools to do good usability design. This is the foundation of the certification of an organization.

Then, the very tough problem came up of how you certify a design—a product, an application, a website—how do you certify that? You certify it by seeing that this design was created within the right kind of organization, by the right kind of people doing the right kind of process, and therefore we can establish that due diligence has been followed to ensure the usability of that design.

So, the question comes up, “Isn’t the usability practice or the usability of a product or application a kind of binary state? Isn’t it either there or not there? Or are there degrees of being certified, getting to a final objective?”

There are three levels of certification. These levels correspond to the level of maturity within an organization. In the usability maturity model, you start with Level I, beginning usability. But I don’t think anybody wants to certify as a beginner. Next is Level II, when you’re starting to manage usability because you have an executive champion—but that doesn’t really indicate any serious capability to do usability design. It is still a starting point. Real user-centered design capability comes when you have the essential pieces in place. So, our certification starts at for Level III where this is true.

Many organizations may be ready right now to be certified at Level III at least. What Level III means is that you have the essentials in place to do good user-centered design. You should at least have a reasonable methodology, something

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in the way of standards, a handful of trained people—these kinds of capabilities indicate that you have a serious approach to usability.

Level IV says that you have ALL of the pieces solidly in place—a complete set of capabilities.

Level V is just a small change from that—maturity. Level V says that you have enough staff in order to routinely do user-centered design, and you have a culture which expects to do that. So, they’re not saying “Oh, we have a design. Should we do user-centered design?” Rather, they’re saying “Okay, we’re doing a design, and we have to do all those things we normally do to make sure it’s usable.” We believe that as the organization becomes mature, the quality of design will mature as well.

The Usability Maturity Chart (Version 2.0) is a tool for assessing an organization's usability maturity. It is structured as a grid with five levels of maturity (Level 1 to Level 5) and various usability activities. The legend indicates that a grey circle represents 'Not there', a blue circle with a white outline represents 'Some what present', and a solid blue circle represents 'Present'. The chart is divided into sections: Strategy, Infrastructure, Education and Training, and Staffing. At the bottom, there is an 'Organization Certificate Audit' section with three gold medals.

Usability Activity	Managed Usability				
	Level 1 Beginning Usability	Level 2 Executive Champion	Level 3 Essential Capabilities	Level 4 Full Capability	Level 5 Mature Practice
Strategy					
Written Strategy	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Infrastructure					
User Centered Design Methodology	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
User Interface Standards	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Repository of User Ecosystem Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Usability Test Laboratory	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Metrics and Continuous Improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Education and Training					
Regular Executive Briefings	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Usability Introduction for Design Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Professional Training for Usability Staff	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Advanced Training for Usability Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Staffing					
Executive Champions	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Managed Usability Organization	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Core of Certified Staff	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Sufficient Staff to Meet Demand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Organization Certificate Audit					

Is HFI certifying that applications or products are usable? Or, is HFI certifying that all of the best practices have been followed to ensure maximum usability?

It’s really the latter. We’re not certifying that every individual is going to believe that the design is usable. In fact, that’s not even the goal of our field. I remember

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the second class I ever took. I was told we design for the fifth to the ninety-fifth percentile. Now, that’s not 100% true, it depends on risks and things like that. But, we don’t expect that EVERYONE will be able to use our design. If we designed for everyone, it would be miserable for most people. So, the certification doesn’t mean everyone will say “This is easy, this is great! I can use this without training!” What it means is that the design has been optimized from a usability viewpoint, which is really what we want.

We don’t want something that everybody can use without training, but it may be awkward to use after some time. We want something where the best practices have been followed to optimize the overall user experience—short term, long term, in terms of speed and accuracy, self-evidency, satisfaction, safety—all those kinds of issues. What we want is the correct practice, that’s what we’re certifying. Not that “in some test everybody could use the design on the first try.” Or, even that someone will not be injured or killed. We are certifying that due diligence was used in designing for the user.

Why now?

There are a couple of reasons why we are launching certification just now. One is that this is the time that certification is needed to move the usability industry forward. In 2000, when I started thinking about and writing a book on the institutionalization of usability, it was just an idea. We were envisioning industrial-strength usability work, but very few organizations were seriously moving toward mature usability practices. It was rare to find that. Mostly, usability was done on the basis of craftsmanship—individuals with some apprentices. In the craftsmanship model they did OK work. It was worthwhile. But as we expected, small siloed craftsmanship groups can’t compete with serious, process-driven usability work.

So it’s no surprise that today we’re finding literally hundreds of maturing organizations all around the world. We’ve got a practice in supporting organizations as they work out their strategy and put together the pieces for a mature practice. We see organizations setting up usability practices on every continent—including Africa, Australia, and China—which is very exciting.

Today, with that maturity in place, or growing, it’s time to give organizations the ability to certify. It’s also the case that we have the pieces in place to make certification possible. Part of this is understanding how to certify. Part is being able

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to have models in place—like our usability maturity model, and the Usability Quotient™. There’s a set of things we’ve had to build over the years in order to say, “Yes, we have systematic ways of validating the maturity of an organization.” And, finally, the holy grail is to certify that end offering.

Why certify usability?

We’re doing this because the field needs it. When we came out with the Certified Usability Analyst™ program, we did it because the field needed it. Back in 2002 when we started the CUA™ program, I had approached every usability organization I could find, asking for a practical certification program for individuals with an interface design focus. It seemed pretty clear that they were not ready to offer the needed program, so we created it. Some people asked, “Who are you to build a certification?” At one level, we were, and still are, the biggest company specializing in usability. But mostly SOMEONE had to do it. And it is VERY clear that the field did need that certification. We’ve certified about three thousand people as CUAs—that’s probably ten percent of the world’s population of competent usability professionals.

We have certified people from Milwaukee to Australia, to China, to India, and Africa. In fact, we even run certification tests in Mandarin. We’ve maintained the integrity of this program, not as a test of taking HFI classes, but rather as a benchmark of understanding in the field. We are proud of the many people who have gotten their CUA without taking a single HFI course. I am absolutely certain that the CUA program moved the field forward.

Now this certification of organizations and designs is the new need of the time. I’m 100% convinced that this next step in certification will be good for the entire industry. It will propel organizations to invest in serious usability work. It will ensure that professionals in the field are recognized. And in the end, it will improve the usability of the things people use.

What exactly will be the benefits of certification?

Different people will benefit in different ways. Say you have an internal usability practice. If you can say, “Look, we’re a certified usability practice—we’ve met

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“So, just like people get their CUA certification without any training from HFI, an organization can get the Certified Practice in Usability, and they can get individual offerings certified, without doing any HFI training or consulting.”

criteria that have been clearly set out for our level of maturity,” this says something to the rest of the organization—that a level of accomplishment exists.

There is the executive who wants to strengthen an organization. Apala has put our Indian operation into an ISO 9000-certified framework. I don’t think it’s done much to sell usability work for us—but it’s a discipline. And it’s worth it as a discipline. This certification in usability is also a discipline. If you follow this, if you move ahead in maturity, you’re following a discipline of good user-design practice.

If you’re buying or selling things, this is a way of ensuring that they are going to be usable. I know a number of department stores that have usability test labs to test appliances. Why would a department store need this? They’re job is really selling stuff, not testing. But if they sell an appliance that’s not usable people complain. They’ll often break it and return the appliance out of frustration. So, instead of running a testing lab, the department store can just say “Oh, I can see it’s Certified Usable, I know that proper practices were followed.”

If you are buying a product, or an application that’s been developed in another country, by another vendor, now you can say, “This needs to be Certified Usable.” Then, you’re not going to get a final offering out that people can’t figure out how to use. In the end, customers will value it, knowing they won’t buy a DVD player that keeps flashing “12:00” into the middle of the night. They can say “I know I’m buying an app which will go onto my iPhone that won’t confuse or frustrate me.” So, there is value in many ways to many people in doing this certification.

But, the biggest value to me is that it moves the field ahead. Because as we all move user-centered design forward into an optimized level of maturity and capability, this kind of clear set of criteria and certification is going to empower practitioners.

How, exactly, will this benefit our existing CUAs?

Your CUA designation means that you have demonstrated personal capability. Now, you have an opportunity to move your organization to certification. You’re capable, with just a little bit of training, to submit an offering and say “I want this certified as being usable.” So this is another level of value for our CUAs, and also for other professionals certified by the Board of Certification in Professional

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Ergonomics. Somebody certified with a CPE or CHFP will have the same exact privileges, because they’ve certainly demonstrated solidly that they understand the field.

To qualify for a Certified Practice in Usability™ (CPU) you don’t need to use anything from HFI. You don’t need HFI consulting, training, standards, tools—none of that. We just want an organization to demonstrate maturity. So, just like people get their CUA without any training from HFI, an organization can get the Certified Practice in Usability, and they can get individual offerings certified, without being a client of HFI. This is purely an offering to the field, which I think will move the field, as a whole, forward.

When you decided to introduce certification for usability practitioners, everybody said, “Why HFI?” My question for this new certification is the same, “Why HFI?”

On one level, we’ve shown ourselves to be responsible and effective in the CUA program. Having three thousand people certified, being able to administer that fairly, without any kind of bias or other issues happening in that process has, I think, shown a lot. The other point is who else would do it? If there were some other organization in place to do it, and the certification was already there, I would be very happy. I could just consult with companies and help them to become mature, help them to have better standards, and build their organizational capability. That would be very powerful, but it’s not there. And, since it’s not there, we’re going to put it there—end of story. And, I think that we’ll see the same kind of success that we saw with the CUA program.

But, I still have this question. Doesn’t a usability test perform the same function as this certification program?

Not at all. Actually, I spent a couple of decades thinking about how we could use a usability test to certify something as usable. You can’t do it. Anybody who says they can just doesn’t understand.

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Imagine for a minute that you're trying to certify wheat. Now, if you certify wheat based on its nutritional content, you can put it in a machine, it grinds it up, it tests the nutritional content, you read the results and say, “Okay, it meets the criteria, it's certified.” No problem. But what if you want to certify the taste of the wheat? You can't put that in the machine. You have to have people try it. No matter what you do with the wheat, some people will like it, some people won't. So, what's the level of taste that you consider to be usable, how many people do you have to test with to find out whether it's 79% usable (which is not certifiable) versus 80% usable (which is certifiable). It's impossible to find a clear point when something BECOMES usable. Does 80% of people being able to complete a set of tasks mean it's usable? Why is 79% not certifiable? Then, I also have to test with thousands of people to tell the difference between 79% and 80%.

Now, here's the real problem. When you run a usability test, how long do you run a test for? Maybe, one hour. So, in a one hour test, what I'm doing is measuring initial usage. What if I have a product that's going to be used for months or years? Now, I don't really even care about the first hour. I can easily have a design that's not self-evident, but within a week I'm really good at it and it's fast and effective. But another design, which is much better in the first hour, could be terrible a week later.

I see your point. You might be certifying with completely incorrect criteria. So, usability test are not a valid way of telling if things are actually usable.

What you need to do is take a completely different approach, which is what we've done. It took us decades to figure this out, but certification must mean that you have trained, certified people, following a user-centered process within an organization that has the right kind of capabilities and tools. It means they do the process, and document that they do the process, and that certified people validate that the process was completed properly and has resulted in good designs. Then we can do an audit to make sure that's true. Part of what HFI will do in this process is ensure that people, when put under the pressure of their organization, won't certify things that shouldn't be certified.

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OK, so usability testing is not enough to certify an offering. But what about other processes. ISO has a lot of design processes. How does this certification relate to ISO 13407?

ISO 13407 is a very basic user-centered design process. It just says “We know who the users are, we’ve build something with some thought, then we tested it.” I wouldn’t consider that a very strong user-centered process.

Now ISO 18529 is a really serious methodology—a very good methodology—but it’s really meant for very large-scale, enterprise-wide systems. If that’s what you have, that’s a great methodology, and you can get certified with that methodology. And there are other methodologies, in other circumstances, that would make more sense.

We love the work that ISO is doing, but sometimes ISO work will be effective for certification of an organization or a product, sometimes not. Even if you look at ISO 18152, which is the maturity model, it’s more about what you do than what you have. What we really want to look at is, “Are the standards in place, are the tool sets in place, are the organizational structures in place?” When we look at maturity, it’s not so much about what you do. So, ISO work is great. In particular, ISO has a lot of useful guidelines that are core in the field. The original work by Smith and Moser, which I actually worked on in the early 1980s, gave this huge, long set of guidelines.

I remember that—it’s a huge checklist, never-ending!

Yes. It’s possible that nobody’s ever read it, not the whole thing. [Ed: Eric joking.] That work has been continued and ISO groups have gone into specialized areas—like looking at video display units, and what the requirements should be for legibility. They give a lot of good best-practice information. When we do our courses, we draw from that, for example. ISO guidelines should be used by every mature usability organization as a foundation in their practice.

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Could you tell us about the certification process? How does an organization get certified? Or, a product or application?

First people go to our website and there's a short 10-minute questionnaire. [It's also included in the appendix of this white paper.] The questionnaire will give an indication of whether the requirements are met or not.

I think many organizations will find that they already meet the requirements for certification. So, they can check with this short questionnaire, and if it looks good, they can request a full certification form from us. HFI staff will interact to help them fill it out, in terms of explaining things and answering questions. Then they submit the application, and we have a process to review it systematically. We will also do our own investigative research. For example, if they say they have an executive champion, we'll talk to that person and make sure there is a reasonable understanding of usability. So, we have an auditing process. If the organization passes, then it gets certified at a certain level.

Once the organization is certified at a given level, then they can submit specific offerings for certification. This will require a certified individual who has taken and passed a two day course on how to submit a certification request. The certification of a design requires proof that the required process and deliverables are in place, and that the quality is approved by the internal certified staff.

If somebody repeatedly delivers failing submissions, they'll lose their certification from us. They'll lose their ability to submit for two years. And, that's in their interest. Because we don't want organizations to be able to pressure a person and say, "Come on, just certify it, it's good enough." We want you to have the power of HFI behind you so you can say, "The offering needs to meet certain criteria, or I'm going to lose my certification." In a sense, that strengthens the certified individual and it should help make this a serious reality as opposed to something that somebody can fabricate.

That's very good. How long does the certification last for? Does it need to be renewed?

There is a quick re-certification every year. It's a small process to just verify that the pieces are still in place. So, maturity is there, the design hasn't changed, so it's a much easier process to do an annual re-certification.

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Do you think that at this point, there are many organizations who are already there and can be certified?

I would think there are hundreds of organizations that would already meet the criteria for certification. Because, globally, we have so many organizations that are putting together serious, industrial -strength usability operations. They have the certified people, they have the operations, they have the methods. This is not a certification that is asking people to do something strange or idiosyncratic. This just says you’re doing the normal best practices.

It’s the same thing as the CUA. To become a CUA, you need to pass a test. If you’re good in the field, if you’ve had serious training—even if it’s not HFI training—you can pass the test. We’ve had lots of people like that.

In case anybody is interested, do you offer pre-certification assistance?

Well, we can do some things there, but what I recommend now is that people take the 10-minute quiz and see if they’re close—where they stand. I think that we’ll find many organizations who can get at least level three certification with very little work. At the same time, I’m hoping this will help motivate organizations to greater level of rigor and greater levels of capability. That’s why we’re going through all this effort to put this in place. It’s what I think the field needs right now.

* * *

For more information on HFI’s new certification program for a Certified Practice in Usability™ (CPU) or a Certified Usable Design™ (CUD) please visit our website at www.humanfactors.com/certification/.

Appendix: Ten Minute Requirements Questionnaire

HFI provides certification at Level III, IV, and V of our maturity model. Level I and II do not represent a serious usability engineering capability and therefore can receive no certification. The following survey will suggest if you are likely to receive certification if you apply. If you fail an item, we recommend that you remedy that deficit before application for certification.

* * *

Executive Champion

Do you have...

- An Executive Champion who actively supports usability from a high level in your organization?
- Is your executive champion familiar with the need for usability and the requirements for having a mature usability practice?
- Does your executive champion have a written strategy for growing the usability operation?

Yes to all

NO (You will fail certification)

Infrastructure

Do you have...

- A written user centered methodology that includes the fundamental activities such as data gathering, structural design, detailed design, and usability testing?
- Some interface design standards with reusable examples? (the examples and rules need not be documented fully)
- Access to a usability testing lab, even if rented?

Yes to all

NO (You will fail certification)

Appendix: Ten Minute Requirements Questionnaire (continued)

Training

Have you had...

- At least 2 executive briefings on usability in the last 12 months?
- At least 2 educational presentations on usability in the last 12 months provided to the general design community within the organization?
- At least an average of 1 day of professional usability training or usability oriented conference attendance for each usability team member?

Yes to all

NO (You will fail certification)

Organization and Staffing

Do you have...

- An established usability organization? (organization chart has at least one organization with responsibility for usability as a part of their mandate)
- Four certified usability staff or FTEs? (CUA, CXA, CPE, CHFP all acceptable)

Yes to all

NO (You will fail certification)

YES to all? What to do?

If you answered YES to all the questions, it is likely that you already qualify to have a Certified Practice in Usability™. Please contact HFI to receive a certification application form.

Email: hfi@humanfactors.com

Web: www.humanfactors.com/certification/apply.asp

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About Dr. Schaffer



Eric Schaffer, Ph.D., CUA, CPE
Founder and CEO
Human Factors International

Dr. Eric Schaffer is the founder and CEO of Human Factors International, Inc. (HFI). In the last quarter century, he has become known as the visionary who recognized that usability would be the driving force in the “Third Wave of the Information Age,” following both hardware and software as the previous key differentiators. Like Gordon Moore’s insight that processor power would double every 18 months, Dr. Schaffer foresaw that the most profound impact on corporate computing would be a positive online user experience—the ability for a user to get the job done efficiently, easily, and without frustration.

Dr. Schaffer’s book, *Institutionalization of Usability: A Step-by-Step Guide*, provides a roadmap for companies to follow in order to make usability a systematic, routine practice throughout their organizations. Dr. Schaffer also co-developed The HFI Framework™, the only ISO-certifiable process for user-centered design, built on principles from human-computer interaction, ergonomics, psychology, computer science, and marketing.

Dr. Schaffer has completed projects for more than 100 Fortune 500 clients, providing user experience design consulting and training. He has recently been traveling the world teaching HFI’s newest course, How to Design for Persuasion, Emotion, and Trust.

Dr. Schaffer is a member of the Human Factors and Ergonomics Society and a Certified Professional Ergonomist.



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