Solution Anthropology

User Advocacy

Geri Schneider Winters

http://www.solutionanthropology.com

information@thefluidapproach.com

Contents

1. What is Solution Anthropology?

Solution Anthropology is the discipline of observing users in their native environment for the purpose of designing a solution that meets their needs in that environment. Solution Anthropologists work in fields such as IT, medical equipment design, consumer product design, business product design, consumer research, process improvement, and efficiency studies.

Solution Anthropology can be considered a kind of sociocultural anthropology applied to discovering what the users really need. Solution Anthropology emphasizes participant observation as the primary way of gaining information. Observation involves going for extended periods of time to where the users are performing tasks to gain first-hand knowledge of what the users need to do to accomplish their various tasks. This research is combined with a deep knowledge of people and cultures to create solutions that delight the users and reduce mistakes made by human error.

Some say observation is not very important. Interviews work just fine. But there is a lot of information that no one will think to tell you that you can observe when they are working. Then based on that information, you can create solutions that not only address users' needs but go beyond that to create something that truly delights the users.

One time I was observing a very senior defect reviewer. She was unbelievably fast at scanning defects and sending each one to the right queue to be worked. But the system would randomly delay briefly when moving to the next defect. Not regularly, just sometimes. I saw her body tense each time this happened. But when I asked her about it she said, "I know it happens but it doesn't really bother me." I said I thought the problem could be fixed and she said "It really isn't a problem." That is what she said, but her body language said something different. I wonder how much her neck hurt at the end of each day because of the tensing up each time the system delayed.

Care must be taken to avoid thinking that watching one user is enough. I needed to watch a lot of defect reviewers to see if this delay was a common problem or just something that bothered that one user. Maybe other, slower defect reviewers did not notice the delay because the system was still faster than they were. So for them, the screen was always ready.

You must be willing to spend some time at Solution Anthropology. One hour observing users is almost never enough time to get all the information you need. The more people you need to watch, the farther apart they are from each other, and the number of different environments they work in the more time you will have to spend. We do multiple observations for multiple purposes, including understanding the culture and physical environment where the people work. When designing a good solution, this understanding is just as important (and sometimes more important) than the work that is being done. For example, a solution that works in a quiet office may be completely wrong on a noisy factory floor.

My best opportunities for good Solution Anthropology come when I am embedded in the culture. To do this, I join the team as a contractor doing real work. At the same time I am observing and analyzing what I see. Because I am part of the team, people do not behave differently around me than they usually do. I am just another co-worker. This avoids observer effect, where people act differently when they are observed than when they are not (a common problem with observation and why we prefer participant observation). Being embedded in the team also gives me the extended time I need to find out the true needs and what there is about the culture that I need to know to guide the choice of solution. I want the

solution to not only meet the users' needs but do so in a way that is best for the environment where the solution is used.

Solution Anthropology is becoming more and more important. We see the need for it in companies following Lean Startup principles, any project involving mobile, process improvement, product design, and even in market research. Solution Anthropology is not limited to software or technology solutions but is needed anytime you want to truly delight the users of your products or design solutions that reduce the risk of human error.

With an interest in people and culture, Business Analysis (BA) and User Experience (UX) professionals already have many of the skills of a good Solution Anthropologist. By developing broad and deep observational skills, BA and UX professionals make outstanding contributors in this growing field.

2. Overcoming Observer Effect

Observer effect is when people who are being observed behave differently than they normally do. Anthropologists know they have to spend enough time with the people being observed that the fact they are being observed is forgotten. This is why anthropologists talk about being a participant observer.

A participant observer makes him/herself a member of the group being observed. Very quickly the other members of the group forget they are being observed and so the observer sees the true nature of the people, their interactions, and the environment where the group is together.

Grace Robertson is a well-known documentary photographer in the United Kingdom. She has had a long and very successful career. Like anthropologists, because she is trying to capture the real situation in her photographs, Ms. Robertson has to deal with observer effect. It can be very challenging for her, since she is over six feet tall and very easy to see. Some of her most famous prints are of a group of women on a mother's day out. She spent time with the women before the day, getting to know them, and they got to know her. She spent the whole day out with them, participating in all the fun, as well as taking some amazing photographs. The other mothers accepted her as one of them and so did not "perform for the camera". They were just themselves.

The participant observer has to take care to remember he or she is there to observe and not get too caught up in the culture of the group being observed. If Ms. Robertson had gotten too involved with the mothers she might have forgotten to take the photographs. Or she might have made different choices of what photographs to take based on how she personally felt about the people being photographed instead of choosing based on journalistic need. As a participant observer, you need to maintain a balanced viewpoint, not allowing your suggested solutions to be swayed by personal likes or dislikes of the people involved but rather based on a rational analysis of their needs.

Another technique to overcome observer effect is to be very still. This works well in situations where the people you are observing are busy with a task, so it is easy for them to forget you are there. A friend learned to play poker in Las Vegas by standing behind poker players. At first the players and the dealer noticed him approach the table. But when he just quietly stood watching, since everyone was busy playing, everyone forgot he was there. He spent an hour at a time just watching with no one noticing.

Because you need to be able to make notes, in the case where you are using the technique of staying still to avoid observer effect, you will want to position yourself where the people you are observing are not distracted by your note taking. This may be done by staying behind the people or by allowing

enough distance that you are no longer noticed. I also recommend you write notes on paper or a tablet because it is quieter than typing on a keyboard.

These two techniques, become a participant or stay very still while watching (silent observation), are methods you can use to reduce or eliminate observer effect so that you can get correct information. When I really need to know the culture of a group, for example when deciding how to approach a change initiative, I like the depth of information I get as a participant observer. The downside is that it takes a very long time (typically months) and much of my time is taken up being a participant. Silent observation takes much less time (several hours or days) and I can stay focused on just observing but I will not get much cultural information. Silent observation is good for situations where the task being done and the physical environment are the important things to discover.

3. Solution Anthropology Inside Your Company

Users are not just your customers and they do not just use software. Users can be found throughout your company using things such as the company cafeteria, the reception area, meeting rooms, telephones, mobile devices, VPN, web conferencing systems, a large amount of software and apps, and many other things throughout the building. We need Solution Anthropology in all these areas.

One company where I worked spent over a year redesigning and rebuilding one of the company cafeterias. They invited professional designers to look over the space and propose cafeteria designs. These were shown to corporate executives who chose the one that appealed to them. The cafeteria was built with 5 different food stations spread throughout, each one with its own menu and daily specials, which provided a lot of choice for the employees.

Opening day arrived, and that is when they discovered the problems. In order to find out what was available to eat that day, a person had to walk to each station to look at their daily specials. But there was no room to do so because the space design had the food stations too close together for the volume of people being served. Lines from one food station intermingled with lines from another. It was hard to get from the food stations to the checkout because it was so crowded. Arriving at the checkout area, you discovered there was no place to set your tray down when getting out your wallet to pay for the meal.

They should have started with Solution Anthropology, observing the other cafeterias to see what worked and what did not, then mocking up the proposed design in a large conference room and inviting 100-200 people to walk around as if they were buying lunch. Instead they spent a lot of money to develop a frustrating experience for those who used that cafeteria.

It is terrific to use Solution Anthropology to discover how the people who buy our products use our products in real life. It is also great to use it to discover what else we might be able to provide our users to meet needs we had not anticipated. Delighted users buy more from us and stay with us for a longer time, which is very good for the company. But we also need Solution Anthropologists to look inside our companies to make the place we work more comfortable, to make our work more efficient, and to make the most effective use of all our resources. A happy workforce is a productive workforce.

4. Is a Solution Anthropologist a "Real" Anthropologist?

You may be thinking that you cannot be a Solution Anthropologist without a degree in Anthropology. That is not true. Anthropologists work in a wide variety of settings and not all of them have degrees in anthropology. Rather, they all have an interest in anthropology.

Anthropology is the study of people and their cultures. Many anthropologists get into the field because they want to use the information they discover to improve people's lives. If this sounds like you, you can be an Anthropologist. The difference between you and people working as Anthropologists is learning the practices of anthropology and following the anthropology professional code of ethics.

If you are a Business Analysis (BA) or User Experience (UX) professional, you likely have relevant skills such as empathy, listening, interviewing, and analyzing. To focus more on Solution Anthropology, you want to increase your skills of observation. In addition, if you are not experienced with designing, testing, and proposing solutions, you will want to spend more time in that area.

If you are interested in broadening your anthropology skills, you can take classes in anthropology and related fields. Knowledge useful for studying people can be found across a broad spectrum of disciplines including social and biological sciences, the humanities, and physical sciences. If you are a BA professional, you can spend time learning more about UX. If you are a UX professional, you can spend time learning more about BA. Like any other anthropologist, the more you learn, the better you will be at Solution Anthropology.

Some will say that Solution Anthropology is "just a BA doing observation". That is like saying swimming is "just floating while moving your arms and legs". While there is a kernel of truth in each statement, we recognize that there is a skill to being a good swimmer and that there techniques to learn to do it better. The same is true of Solution Anthropology. While it depends heavily on observation as a research technique, we still have products to deliver, and so observation much be combined with solution design.

Solution Anthropology is not a new label for a Business Analysis or User Experience professional, but truly does incorporate the practices that anthropologists use when studying people in their native environments. It is an anthropology discipline applied to the design of consumer and business solutions. It incorporates practices from anthropology, business analysis, and user experience.

5. The Importance of Native Environment

In Solution Anthropology we stress the need for observing users in their native environment. This is for three reasons. The first reason is that if you invite a user to your office and watch that person work you will get observer effect. The user is extremely unlikely to behave the same in an environment that is artificial to him or her as he or she does in their own workspace. The second reason is that you cannot observe the culture of the user's workplace if that person is visiting your office. The last reason is that what works in one environment may not work in others. What works at your office may not work in the user's workspace.

One team was designing a solution for a printing company so the workers would know when a print job was complete and ready to package. They started by inviting one of the workers to their office and interviewing that person about what was needed. Based on that discussion, they thought of having a bell ring when a job was complete. Then they went to the office where the work was done. There was no quiet office where jobs were monitored. All the machines and people were in one big room and it

was very loud. There was no chance that a ringing bell would be heard. They ended up designing a solution with a flashing light instead.

Another company had a notification system used in an airplane cockpit. They thought they could use the same system inside the control room of a ship. It did not work, again because of noise levels. The cockpit was relatively quiet, the control room was not.

I have worked with a number of companies on process improvement efforts. The culture of the company matters tremendously when proposing change. One company had a culture that could be described as "just do it". They were completely willing to change everything at once and just make it work. Another company had a culture of punishing failure. Before making any change they wanted to study it carefully, try a few pilots in well-controlled circumstances, and get a lot of people involved so no one person would be at fault if anything was less than perfect. They did not want to start any kind of change until they had convinced themselves it would be successful and that the risk of failure was as low as they could make it.

Environment matters. Culture matters. Different kinds of users matter. A person interacts with his or her smart phone differently when sitting at a desk at the office than when at home doing tasks around the house. So when designing an app for mobile you have to consider where it will be used before arranging to observe users. A solution you design when observing someone at work may not really meet the user's needs when they are at home. A project management app you design to be used on a civil engineering job site may not be usable by a Marine doing the same kind of work, even though the functionality is the same. The environments they work in are that much different.

Solution Anthropologists need to go to where the products and solutions will be used. This is a significant aspect of the job. The more you consider things such as the many environments where people work (home, office, field), a global workforce spanning many cultures, mobile, embedded medical devices, and wearables, the more you see the need for gaining information about the environment where your products and solutions will be used. Most bookreaders are designed to be readable in bright sunlight. Most tablets are not. Where are your users when they are viewing your book or app?

6. When Interviewing is Not Enough

When working to determine user needs, we tend to rely heavily on the time-honored interview. Interviews are great when you are looking for opinions or points of view. But when it comes to how someone behaves, and interview is a poor substitute for observation. This is especially true when the interview is not at the person's workspace. We often cannot interview at their workspace because of issues such as noise or not wishing to disturb other people in the area.

Most people are not very self-aware. They get involved in the work they are doing to the point they do not really know exactly what they are doing. We all know there is the process as-documented, the process described in an interview, and the process as-performed. These are almost always at least somewhat different. So the first reason to observe is to find out what is really going on.

Another reason that interviews alone are not enough is that people will forget to tell you things. The artificial intelligence community in trying to create expert systems has been struggling with this problem for many decades. When someone describes how they work or how they use something, they will

generally give you a good big picture view. But there will be things they forget to say. Perhaps you read the written process and notice what someone is telling you is different. If you ask "Don't you do this as well?" the person will likely answer, "Oh, yes. I do that too". The people you are interviewing are almost never deliberately hiding information. There are things it just does not occur to them to mention. Another reason to observe is to get complete information.

Interviews held outside the person's workspace did not provide the opportunity to observe the environment the person works in. We tend to think the environment is not so important, but sometimes small things in the person's environment have a significant impact on the design of the solution. Sometimes of course, the environment is a very important contributor to the design. I still remember working with some Marines on the design of a communication system meant to be used in the field in all types of weather. That was pretty obvious to everyone. What was less obvious turned out to be more important, and that was speed. Even on foot, they tended to be moving fast and their existing communications gear had too much delay to be useful. No matter how well you can imagine someone else's environment, there is no substitute for actually being there. Being in the actual environment is another reason to observe.

A final thing that you will not find out in interviews is who are the other people in the area and what is their relationship to the person you are interviewing? I have had people tell me about the other folks they work with, and whether or not they get along, but I learn a lot more about the culture and interpersonal issues when I am in the work location. A friend shared a story with me about a medical imaging system he worked on. This particular sonogram was used to see how babies were developing before they were born. What did not come out in the interviews with the technicians, but the observers noticed when they were onsite, was that the technicians were copying the sonogram image to give the expectant parents. The parents really liked have a "picture" of their baby before it was born. And so the company making the system added a function to print out an image on paper to give the parents. This delighted both the technicians and the parents. This final reason to observe is to find out about the other people involved and how what you are observing impacts them.

Interviewing is good, but it is not enough on its own. This is why it is so important to develop your skills of observation.

7. Why Observation is Not Just Watching

Some think they know all about observation. It is just sitting and watching someone; what is so special about that? Observation is more than just watching. It is watching with a purpose. There are many reasons to observe, and many different kinds of things to observe. What you observe and when you observe it is determined by your reason or purpose for doing the observation.

Sometimes we observe to get the first ideas of where issues may lie. You may observe for this reason when doing a process improvement effort. There is some thought that maybe "things can be better", but no one knows specifically what that means. And so you go to do an initial observation to get an overall feel for the situation. Generally in this case you are observing to understand the big picture, and not looking for specific details. That will come later.

You might also do this very general kind of observation for general discovery. Perhaps someone asks you to observe a number of users to see how they behave in a particular environment. You don't know what

you are looking for specifically. You are free to consider anything because there is not a specific thing to look for.

In other cases, there may be some knowledge that there are some problems or issues and you want to observe to get more detailed information about those problems or issues. Because you are more focused, there are likely many things you will not notice. While they may be interesting, they are not part of the problem or issue you are investigating. Now you are observing to get detailed information about the problem or issue and what may be causing it. Is it something in the culture, in the process, in the environment, or something about the people, such as poor training for example?

You might want to put a proposed solution in front of someone, perhaps in the form of a mockup or early prototype. You want to observe the person's use of the solution to see if it meets needs that you have already determined. You might also want to see where the person finds the solution difficult to apply and observe why they find it difficult to apply.

Observation always has some purpose. That purpose helps us determine how much to focus our attention and where to focus it. It is not at all likely watching TV. Instead, our attention is engaged and we make note of those things we see that help us fulfill the purpose of the observation.

8. Different Kinds of Observational Techniques

Different kinds of observation fall into two broad categories: participant observation and outside observation. In participant observation, the observer is a part of the community being observed. In outside observation, the observer is not a part of the community being observed. There are advantages and disadvantages to each.

Outsider observation is faster than participant observation and is appropriate in situations where hard to determine things such as culture or motivation are not very important. It is often used as a starting point to get a broad picture of the people and environment being observed, discover where participant observation can be most effective, and determine the appropriate role to assume within the community to get the information required. The primary disadvantage of outsider observation is that you gain only a surface level knowledge of the community and environment being observed.

Participant observation generally takes more time because you have to become a part of the community and spend time with that community. Observation of this kind typically takes place while you are involved with activities of the community. Participant observation is necessary when you need to understand the culture of the community and/or the motivations of the members of the community. Before any cultural change is made, there needs to be participant observation. A major difficulty of participant observation is maintaining enough detachment to be able to observe without bias.

Here is an example of the difference from the world of videography. When taking video of a musical theater production, the company doing the work should aim for a video that is just like being there. I used to be part of such a company. All of the people who worked for that company had decades of experience working in community musical theater as actors and as technical crew. We were all part of the local musical theater community. Other similar companies were composed of people who knew videography but not musical theater. They were outsiders. As participants, we knew the culture, the world of musical theater. Our product was considered the best by the local theater companies (you understand us!) and over time we were the only video company in that musical theater community. The

difference between participant and outsider was having a thriving business or having no business. It can be that important.

Within each of the broad categories, we can describe specific kinds of observation, such as silent observation, interactive observation, and cognitive walkthrough. Each is used for different purposes and to get different information.

In silent observation, the observer does not interact with the people being observed. Instead, the observer sits or stands quietly in a place out of the way, but where she can see what she needs to observe. The observer should stay as still as feasible during the observation period, because if the observer moves around, he will be noticed. What you are trying to do with silent observation is be ignored. When people forget you are there, they are more likely to behave as they normally do instead of acting the way they think you want them to act.

Silent observation works best when people are very focused on a task. In that situation, it is very easy for them to forget you are there. You know you succeeded if the person you are observing finally notices you and says something like "Oh! I didn't know you were still here." Silent observation is the best choice when the people you are observing really cannot be interrupted. Do avoid the common mistake of assuming you can determine motivation by watching behavior. If you need to determine what motivates people, silent observation is not the right tool.

With interactive observation, the observer is watching a person or group of people and asking questions about what is happening. The observer is probably sitting right next to or among the people being observed. This often looks much like a tutorial being given to the observer. What you want is for the people being observed to show and teach.

Sometimes the observation is interactive because the observer is part of what is going on. An observer of a new hiking shoe design might go hiking with a group who are all wearing the shoes to observe and ask questions of the hikers, but also to notice how the shoe is working for the observer. Interactive observation gets you deeper information than silent observation because you can ask questions. It needs to be done in situations where the people being observed can take the time to answer your questions. On the negative side, the people being observed are very aware that they are being observed, even when the observer is a participant.

Cognitive walkthroughs are a kind of interactive observation. The difference is with a cognitive walkthrough, the observer asks someone to do a task and verbalize what they are thinking as they perform the task. The observer asks very few questions and does not guide the person being observed. The purpose of the cognitive walkthrough is to get as honest feedback as we can about what is working or not working about the solution. Because the person being observed is involved in doing some task, the feedback you get is directly about that task, not theoretical.

The difficulty with cognitive walkthroughs is that because the person knows she is being observed, she will want to do it "right". The observer may have to do some reassuring when the person being observed is having difficulty with the task. If he is having difficulty, it is the fault of the design, not the fault of the user. The observer must always keep that in mind and not get defensive about the solution "not working". The Solution Anthropologist is the user advocate. If the user cannot do it "right" it is the solution's fault, not the users fault.

9. Observe Many Users

It is not good enough to observe just one user. That is where many Agile teams fail the users; they invite just one user to work with them to design a solution and so the solution only reflects that one person's needs. Seldom do we create a solution for just one person. More often there are a lot of people who will use our solution. Those people will have different needs and interests.

A Solution Anthropologist will group the needs of many, many people into categories to avoid being overwhelmed by too much information. You have likely created categories for yourself in the past, such as the novice user or the power user. In Solution Anthropology instead of creating general names for the categories of users we create a persona to represent a whole category of users. This makes the people we are serving a lot more real to us and the implementation team. I don't know what a power user wants, but I do know what Bob Smith, technology genius, and super gamer wants.

To find the categories of users you need information about a lot of different people; not just 1, 2, or 3 people, but perhaps 100 or more. Before you feel overwhelmed, you do not need the same depth of information from everyone, nor will you necessarily do an observation of each individual. If you are creating a solution for data entry clerks, there may be a large room full of desks where you can observe a lot of people at once. You can also make use of other tools to identify people who are representative of a group, then do detailed interviews and observations with them.

I once consulted with a company who said they were required by regulation to get input from every single person affected by a change before they could design a solution. For this particular project, that was over 500 people and they were all over the USA. I asked if everyone had the same authority to offer suggestions for requirements. They said no, they were just required to listen to everyone. So we created a survey that helped us identify different kinds of users and invited each person to give additional information in a free text box. We analyzed those surveys to find the 27 people we needed to interview and observe.

When you are dealing with consumer products and perhaps millions of people, you have to be clever to find ways to get the information you need for a reasonable time and cost. The field of Consumer Ethnography, which is very similar to Solution Anthropology, has been developed to try to address those needs.

If you are dealing with a big change, you may need to work with people who are not the actual users but who interact with them on a regular basis. This is because the impact of the change may be larger than the direct users of your solution. The users themselves may not be aware of the impact of the change on others.

In one case I know of, a team changed how they worked to be much faster. That sounds good, but they were just one part of an overall process and now the people at the next stage were overwhelmed by a flood of work they were not expecting.

10. The Order of Work

Sometimes when you begin an endeavor, you already know essentially what the problem is. This is often the case when doing a project inside a large corporation. You may not know all the details, but you know in general the problem to be solved. In other cases, such as consumer product development, you may know the market, but are looking for an opportunity. You may not yet know what the problem is that

needs to be solved. For these reasons, observation may come before and/or after the writing of the problem statement. Interviews may need to proceed observation or they may come later. The order that you do work will depend on what you are trying to do.

For a typical large company project, especially one being done to solve issues inside the company, you will start by clarifying and refining the problem statement. You will probably do interviews to gain the information you need. You might do some observations to verify that the problem exists and that it needs to be solved.

You then use the problem statement to make a plan for the best approach to finding a solution. To get the information you need to determine a solution, you will use tools such as market, competitor, or vendor research, interviews, surveys, focus groups, and of course observation.

With that information in hand, you craft initial solutions typically as a mockup or paper prototype. Then you verify the solution with users in cognitive walkthrough sessions. You iterate this process until you, the users, and the stakeholders agree on the solution. Then you pass the solution to the implementation team to implement and work closely with them to ensure they understand what is needed.

In general the solution is designed and implemented in short increments. You will repeat the above process until all the needed work is complete. In each increment, you will put the solution in front of users to get their feedback. Whenever possible, you will invite users to do any required User Acceptance Testing. Remember to use different users throughout the project, not the same small number all the time. You want a large variety of user input, and part of your job will be to resolve differences between what the different users want to arrive at the best overall solution.

If you are working in product design, you will likely start with observation. This observation is to determine the needs. It could be to discover a new product, it could be to determine problems with an existing product. You will likely have many ideas and will bring them to a Product Management team to review. They will decide the direction to go and draft the problem or opportunity statement. At that point, you are into a process much like the large company project.

11. The Problem Statement

When doing any kind of work with a group of people, the team needs a focus. They need to know what the goal is to ensure they are all moving in the same direction. The reason for the effort can be written in many ways: a problem statement, an opportunity statement, a list of goals, or even a set of criteria.

It is best to focus on relatively short term goals of 3 months or less. This provides focus for the team and also allows the group to quickly pivot based on new information. It is easier to get people to change direction when they have done a little work than when they have done a lot of work.

The Solution Anthropologist is responsible for ensuring that the problem statement is clear and that everyone understands it the same way. The description of the problem, opportunity, goals, or criteria comes from someone from the business or a Product Manager.

Even if the problem statement already exists, it is worth your time to verify it. I have worked many projects where even though there was a problem statement, everyone had a different understanding of what the project was about. Be sure the problem statement is explicit and visible to everyone

concerned. At the start of the work endeavor, be sure the problem statement is reviewed with everyone by the business representative or Product Manager, and any questions answered at that time.

12. Solution Design

The reason for doing the interviews, observations, research, etc. is to create a solution. The Solution Anthropologist should plan on proposing at least three different solutions. The most obvious solution is not always the best, so by requiring at least three solutions, it forces the Solution Anthropologist to think more about how best to solve the problem.

We always want the users to tell us what works for them, not make assumptions based on observation or interview. So we create the least expensive version of our proposed solution and get it in front of the users to try as fast as we can. This often means we create mockups or paper prototypes. We try to avoid any programming or other development work because once someone has created something "real" they have an investment in that solution, and it is emotionally harder to change it.

You should plan on several rounds of working with a number of different users to get their feedback on your mockups and prototypes. You will want to quickly evolve them based on user feedback and test the revised solution on another set of users.

It is your job as the Solution Anthropologist to find the best overall solution for the users. You will often find there are competing concerns. This is why it is important to create personas for different kinds of users and to work with the decision maker to identify the primary persona. Then as you work with different users, if you are getting contradictory information, you resolve it by considering the needs of the primary persona.

There is a terrific story in the book "Don't Make Me Think" by Krug about an airline considering personas for a new inflight entertainment system. They identified frequent flyer, children, and occasional traveler. Who do you think they chose as their primary persona, the user they most wanted to be happy with the solution? It was the occasional traveler because those were the users who would need the most help using the system. Children are happy to just click away until they find what they want and the frequent traveler has long ago figured out the system. The company did decide to add "hot keys" for the frequent traveler so they would not have to go through all the menus to get to what they wanted. This is exactly the kind of scenario you will be working through as a Solution Anthropologist.

13. KPI's for Solution Anthropology

Sometimes I am asked "Do you have any examples of what good work looks like for solution anthropology?" This seems like a reasonable question. There is a desire to find the KPIs to measure the work of a solution anthropologist. In real life though, this question does not make sense due to the widely varying nature of the work.

The artifacts produced by a Solution Anthropologist vary widely in type, quality, and detail. But they all produce good results. What is important is not the artifacts, it is the behavior of the Solution Anthropologist, the ceremonies they conduct with real end users, and the acceptance of the solution that is produced.

What could be measured are things such as:

1. Were many different actual end users included in the observations, interviews, and cognitive walkthroughs (many depends on the size of the pool of end users)?
2. Did the Solution Anthropologist demonstrate their work often (typically every week or two)?
3. Did the Solution Anthropologist do regular observations of end users, not just one?
4. Were observations supplemented with interviews?
5. Was the problem to be solved explicitly described?
6. Were the characteristics or constraints of the needed solution identified?
7. Did the Solution Anthropologist propose at least 3 different solutions?
8. Did the Solution Anthropologist hold regular cognitive walkthroughs with end users?
9. Was the user feedback incorporated into the solution as it developed?
10. Did end users do the User Acceptance testing?
11. Did the Solution Anthropologists work in pairs?

These measures are of the process of doing Solution Anthropology and are more important for less experienced Solution Anthropologists. But what we really care about are the results. The important thing about Solution Anthropology is that we include the users, directly in person interact with them, and act on their feedback. An experienced Solution Anthropologist may do that and yet not follow all the practices listed above. Ultimately, I measure good Solution Anthropology by the outcome:

1. There are no negative consequences when the solution is made available to users
2. Users start using the solution before you train them
3. You hear comments such as "Finally, someone listened to us!"
4. You do not need a follow-on project to fix the problems users discovered after you made the solution available to them
5. Users are more engaged with the development of succeeding solutions
6. User acceptance of the new solution is extremely high

I know people hate this kind of answer. They want a checklist and a way to measure the work instead of results. But a Solution Anthropologist is dealing directly with human beings who as we know are not really rational or consistent or anything else machine like. The Solution Anthropologist is doing creative knowledge work with other people. So trying to measure the work, trying to come up with examples of good or bad, is like trying to predict the success of a song before it is released. It is the users who will tell you if the Solution Anthropologist is doing a good job.

11. Solution Anthropology and Agile

Agile needs Solution Anthropology. Agile teams think they can just "kidnap a user" to sit with them and that is sufficient to get the requirements for the solution they are developing. Unless you are creating a solution for just one person (almost never true) one user cannot provide the information needed to design a solution for a large group of users. Also, that user almost certainly has another job to do, and that job probably has to do with running the company. Or the user is someone who does not work for your company, so they are even less likely to want to sit with your implementation team. Sometimes the Agile team thinks it is good enough to get the project sponsor to tell them the requirements. But the sponsor is seldom the actual user, many of them do not know much about the users, and because of that they can sometimes get things drastically wrong.

Agile teams say they don't want anyone to get between them and the user. I think they are very wrong. Having a person who is professionally trained to work with users, find the best solution among competing needs, and share that with the implementation team is as necessary for Agile teams as anyone else. It has always been important for product companies. It is equally important when the team is developing a solution for the entire accounting department of over 200 people.

One of the most successful software development shops in the US has been doing Extreme Programming (XP) for over 15 years. But they amended XP by adding an anthropology role because they found that it was not feasible to ask a user to sit with the developers in order to create a solution. Instead, they focused on providing excellent training for their anthropologists. People struggling with Agile from all over the world come to visit this company to find out what they did to be successful. They give a lot of the credit to their anthropologists.

There has been a lot of renewed interest in Business Analysis in the last couple of years. Those skills are very important and in fact we use many of them in Solution Anthropology. What is different about Solution Anthropology is the focus on the user, not the business. The users themselves need an advocate. Most of the time, the business is not that advocate, and in fact the needs of the business and the needs of the users may be in contradiction. Business represents the business, Solution Anthropologists represent the user.

You might say that user advocacy is the role of the User Experience (UX) professional. What I have seen most of the time is that the UX professional is an advocate for good design, but not necessarily an advocate for the users themselves.

What we most like to see in a Solution Anthropology team are Business Analysis and User Experience Professionals who train in anthropology skills and work together to be the advocates for the users. It is less a change in skill set and more a change of focus. The combination of skill sets enables the Solution Anthropology team to really understand the users and to give the implementation team the information they need to turn that understanding into a solution that truly meets the user needs.

12. Solution Anthropology and Lean Startup

Feedback from users is what Lean Startup is all about. Feedback is what enables the lean startup to pivot to respond to market changes. But market research and focus groups are very likely not enough. Someone might come in to your company and say they like your product and it is really cool. But out in the real world they don't share with their friends. You reached an individual user, but not the culture they live in.

The cultural environment can make or break a new product. If you don't understand the culture of the users you are trying to reach, you are not likely to succeed in selling to them. You don't really understand the culture through focus groups or market research. This is why you see kids making a fortune on an app. They created an app for their friends. They are part of the culture they are selling to.

Solution Anthropology seeks to understand not just the user but their environment. In a Lean Startup company, this may include the need to understand the culture the users are part of. To understand the culture is not a fast process. It can take many months to get just a first level understanding of a culture.

In many cases, it is probably faster to hire someone deep in the community you are trying to reach and train that person in any additional skill sets needed so he or she can help you understand that

community. Do not make the mistake of thinking you can just hire that person to represent the whole community. You need to know about a large number of people in the community, not just one member. And so you need to train this community member you hired to be a participant observer inside their own community. This participant observer will be part of the Solution Anthropology team, which likely includes Business Analysis and User Experience professionals.

You want to avoid giving the impression that the participant observer is somehow spying on people. The American Anthropology Association statement on ethics includes:

1. Do No Harm
2. Be Open and Honest Regarding Your Work
3. Obtain Informed Consent and Necessary Permissions
4. Weigh Competing Ethical Obligations Due Collaborators and Affected Parties
5. Make Your Results Accessible
6. Protect and Preserve Your Records
7. Maintain Respectful and Ethical Professional Relationships

(Anthropology Professional Ethics: http://ethics.aaanet.org/ accessed January 31, 2015)

It is in your best interests in a Lean Startup environment to be honest with the people you wish to serve. If your potential customers think you are spying on them or lying to them, they may no longer be your customers. Social Media will be a potent weapon in the hands of unhappy people. Transparency (to the extent you can and still protect company property) and honesty are good for Lean Startup companies. They are also tenants of Agile development, so Solution Anthropology is consistent with both Agile and Lean Startup.

In Lean Startup the Solution Anthropologists will be much more involved with determining what the product is as well as features that are desired. There are many more questions than in a more traditional company. Solution Anthropologists can help a Lean Startup company build trust with the users which is a foundation for sales, especially online sales. Getting the users involved, listening to them, is the best way to create a devoted following for your company and your products.

13. Solution Anthropology and Wearables

Wearables are a hot market. There are more and more products coming out all the time. You would think everyone had one. But the information that is hard to find is that people stop using the devices soon after getting them. 1/3 of American users of non-medical wearable products (activity trackers and smartwatches) stop using them within 6 months. (Endeavour Partners "Inside Wearables-Part 2", July 2014. http://endeavourpartners.net/assets/Endeavour-Partners-Inside-Wearables-Part-2-July-2014.pdf accessed January 31, 2015). Sales are high, but that is not necessarily because the users are buying the devices. 35% are provided by an employer or received as a gift. Some percentage are included as a bonus when buying a smartphone. The reasons cited by users for abandoning the devices are that the devices are not useful, they are not attractive, and the battery life is too short.

Whenever I hear that users do not find something useful or attractive, I am pretty confident that the maker of the product did not consult the users. When I see that a consumer product market is being driven by buyers who are not the users, I see a fragile market. Unlike business products where the user

may have no choice but to use the solution purchased by their employer, users are free to reject consumer products they do not want.

Solution Anthropology is not going to help with short battery life, but usefulness and attractiveness are clearly areas where good Solution Anthropology is called for. The wearables market needs good Solution Anthropology if it is going to be viable in the long term. The challenge is that to do this well requires being where the users are. This is not a neat tidy office setting, but rather the Solution Anthropologist needs to be out at the gym or part of a jogging group to be with the people who are using fitness trackers when and where they are using them. The Solution Anthropologist needs to be around people using smartwatches to find out the problems in the moment when the user is having the problems. The Solution Anthropologist needs to be with the users of the wearables when they say "I wish it did …"

Just like Lean Startup, the best approach is to find one or more people who are part of a community that uses wearables and train them to be a participant observers. This participant observer is part of a larger Solution Anthropology team that includes Business Analysis and User Experience professionals. The participant observer who is already a member of the community could pair with another Solution Anthropologist to help that person more quickly be a participant in the community.

14. Solution Anthropology and Consumer Ethnography

Anthropology is a general set of practices. Ethnography describes the results of those practices. Consumer Ethnography starts with an anthropologist observing consumers in their native environment for the purpose of determining culture, motivation, and preferences. The outcome of the observations is an ethnographic description that is the input to branding and messaging decisions.

Solution Anthropology starts with an anthropologist observing users in their native environment for the purpose of discovering what they need. The outcome of the observations is one or more recommended solutions that meet the needs of the users in their environment.

In both fields you start by doing observations. It is important to keep in mind something that anthropologists know very well: it takes a lot of time to get real information from the observations. This is because of something called observer effect. Observer effect is when people who are being observed behave differently than they normally do. You also have to avoid the mistake of thinking that observing one or two people is enough to extrapolate to a larger population.

Some of the criticism of Consumer Ethnography is that the companies doing it do not allow enough time on the anthropology part to make the conclusions drawn in the ethnography report meaningful. Consumer Ethnography does not tend use participant observer but only outside observer which is much faster. This is OK as a starting point, but will typically not give the detailed information we need. We have to be sensitive to the same issue in Solution Anthropology.

Both fields benefit from combining practices from Anthropology and Analysis. Consumer Ethnography takes that information and combines it with Marketing to produce branding and messaging. Solution Anthropology takes that information and combines it with User Experience to produce business and consumer products.

A Business Analysis or User Experience professional who trains in good observation practices will find these skills apply to many jobs outside IT, including branding, business process improvement, efficiency studies, and product design.

15. Solution Anthropology and Mobile

What could be more important than to consider the user in mobile? There are so many apps out there that getting it wrong means users do not have to accept apps they do not like. We have many opportunities inside our companies to observe people using mobile as well as going to where the devices are used.

An area where Solution Anthropology can really contribute is in doing early mockups and cognitive walkthroughs of ideas before any code is written. I have seen early versions of apps put in front of users to get their feedback, but a lot of time and money was already spent developing those early versions. Instead, we should be looking for the least expensive way to get feedback as early as possible from the users.

One particular case I remember vividly was a voice activated banking app. No one tried early mockups with the users. Instead a more typical requirements and design process was done, where the project sponsor made all the decisions about the requirements and design. When some users were invited to try the early version, significant issues were found that required a major redesign of the app. Those issues could have been easily found by a Solution Anthropologist doing paper mockups. I know this is true because I was there and I could see how an early mockup would have discovered those problems.

Often an implementation team thinks too much about how things should work instead of just trying ideas with users. But really, it is not their job to try ideas with users; it is their job to create a solution. Before implementation ever starts, we need the Solution Anthropologist to work directly with end users in the office as well as other places where they use mobile. Even simple things such as chatting with a mobile user while waiting in line or for a flight can provide a lot of interesting insights. I have gotten more great information just chatting with a seatmate on a plane than in formal settings.

16. Suggested Reading

User Experience
Designing solutions that users love

- Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability (3rd Edition); Krug; New Riders; 2014
- The Inmates are Running the Asylum: Why High Tech Products Drive Us Crazy and How to Restore the Sanity; Cooper; Sams – Pearson Education; 2004
- About Face: The Essentials of Interaction Design 4th edition; Cooper, Reimann, Cronin, Noessel; Wiley; 2014
- The Design of Everyday Things: revised and Expanded Edition; Norman; Basic Books; 2013

Business Analysis
The analytical skills of problem solving, analysis, requirements elicitation, and requirements management

- Business Analysis Book of Knowledge (BABOK), International Institute of Business Analysis
- Applying Use Cases: A Practical Guide 2nd Edition; Schneider, Winters; Addison-Wesley; 2001.
- Agile Software Requirements: Lean Requirements Practices for Teams, Programs, and the Enterprise, Leffingwell, Addision-Wesley 2011

Anthropology

How people think, how they are influenced, and anything cultural. There are so many great books; you will probably want to focus on the people and culture in a specific area, such as Millenials who are in business.

- Why Everyone (Else) is a Hypocrite: Evolution and the Modular Mind; Kurzban; Princeton University Press; 2012
- Thinking Fast and Slow; Kahneman; Farrar, Straus and Giroux; 2013
- The Tipping Point: How Little Things Can Make a Big Difference; Gladwell; Back Bay Books; 2002
- Party of One: The Loners' Manifesto; Rufus; Da Capo Press; 2003
- How Many Friends Does One Person Need; Dunbar; Harvard University Press; 2010
- Influence: The Psychology of Persuasion, Revised Edition; Cialdini; Harper Business; 2006
- It's Your Ship: Management Techniques from the Best Damn Ship in the Navy (revised); Abrashoff; Business Plus; 2012

Interesting Websites

- American Anthropological Association: http://www.aaanet.org/
- Anthropologists in the Corporate Village: http://www.fastcompany.com/27707/anthropologists-go-native-corporate-village
- Business Anthropology: http://businessanthropology.blogspot.com/
- Anthropology Professional Ethics: http://ethics.aaanet.org/