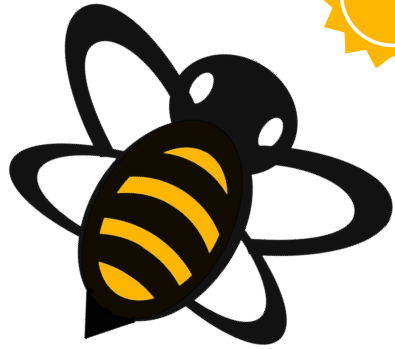
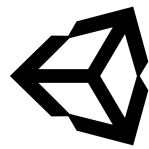


Research For Technologists

Understanding How Domain & User Research
Can Contribute To Software Development





unity



Hello!

I am Melissa Eaden

You can find me at @melthetester

Also: melthetester@gmail.com



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Have a computer or mobile device, pen and paper, and your thinking cap!

QR codes are throughout the presentation, but I have one at the end for the slides, so if that's the only one you get, watch for that one.



3

Three Definitions

Sometimes we all have to start from a shared understanding....

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Defining things are important

When you need a shared understanding, having a glossary of words that folks can references is always helpful.

Doing these kinds of things as a team activity is really good.

I'm giving you these definitions so you understand what I mean in the context of this talk.



Definition: **Profession**

From Merriam-Webster:

- 4. a : a calling requiring specialized knowledge and often long and intensive academic preparation
- b : a principal calling, vocation, or employment
- c : the whole body of persons engaged in a calling

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<https://www.merriam-webster.com/dictionary/profession>

Examples of professions around software development - GO!



Definition: **Industry**

From Cambridge Dictionary:

2. a type of business

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<https://dictionary.cambridge.org/us/dictionary/english/industry>

Examples of Industries - bonus points if they are industries Unity is actively involved with.



Definition: **Domain**

From Cambridge Dictionary (Business English):

1. a particular interest, activity, or type of knowledge
2. a business activity that is controlled by a particular industry, group of people, etc.

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<https://dictionary.cambridge.org/us/dictionary/english/domain>

Examples of Domains (these are usually the sub categories under an industry in general. I have a couple of examples, but let's see if we can figure one out first.



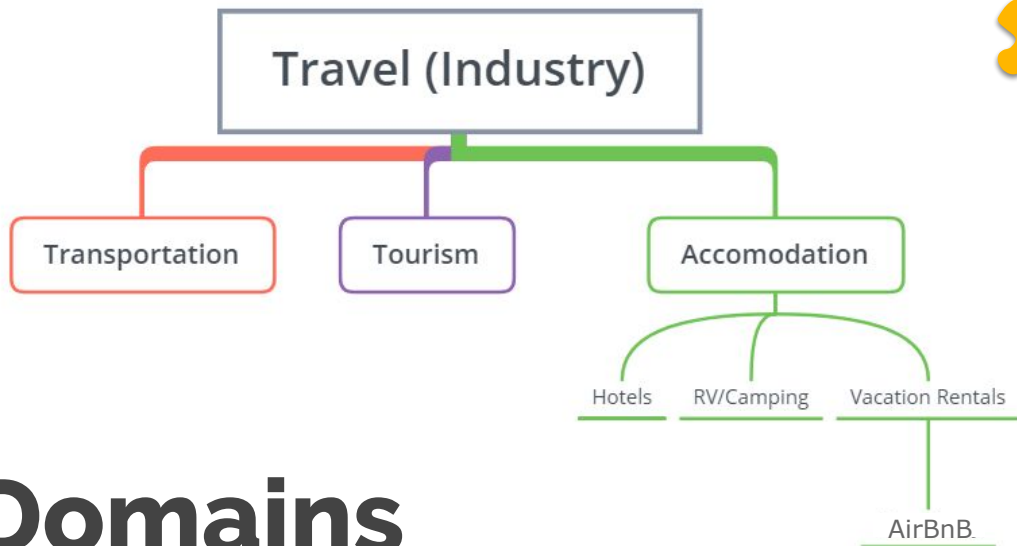
What's In A Definition?

- Profession can hint at an industry and/or a domain
- Industry can be different from domain
- Domains can be complex
- Domains can cover more than one industry
- Industries can cover more than one domain

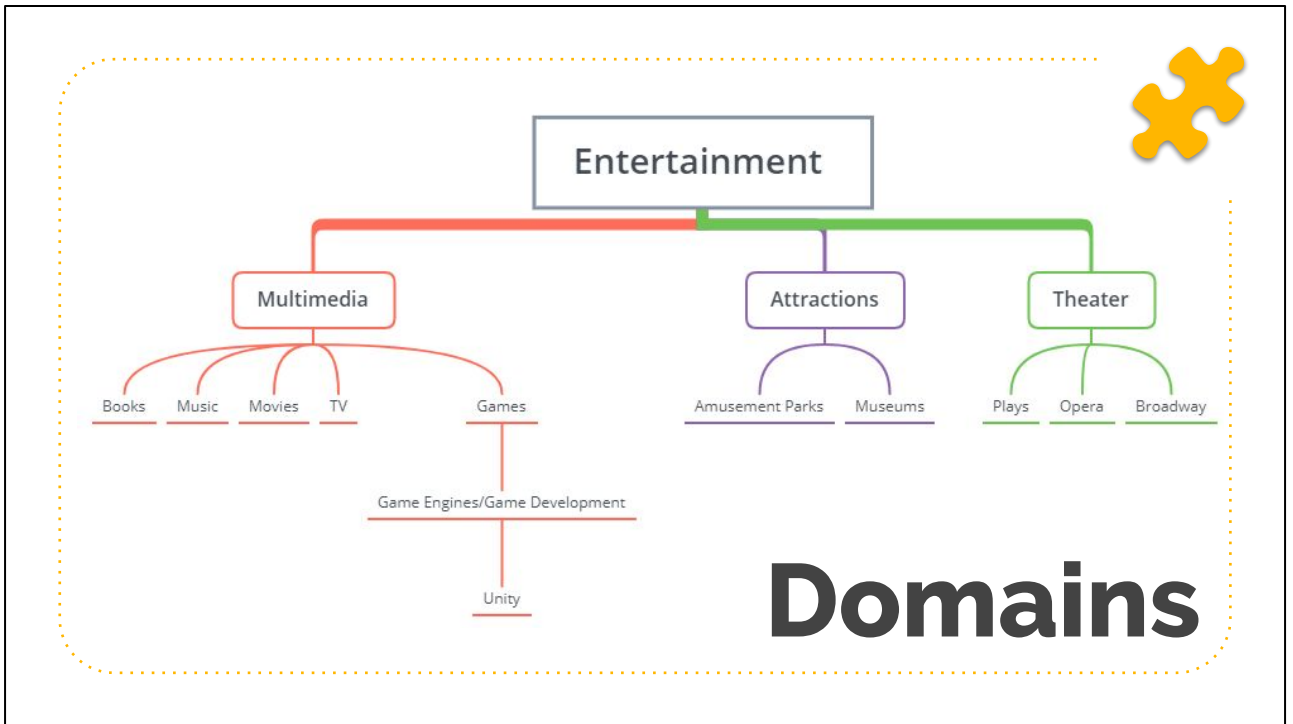
Let's look at an example!

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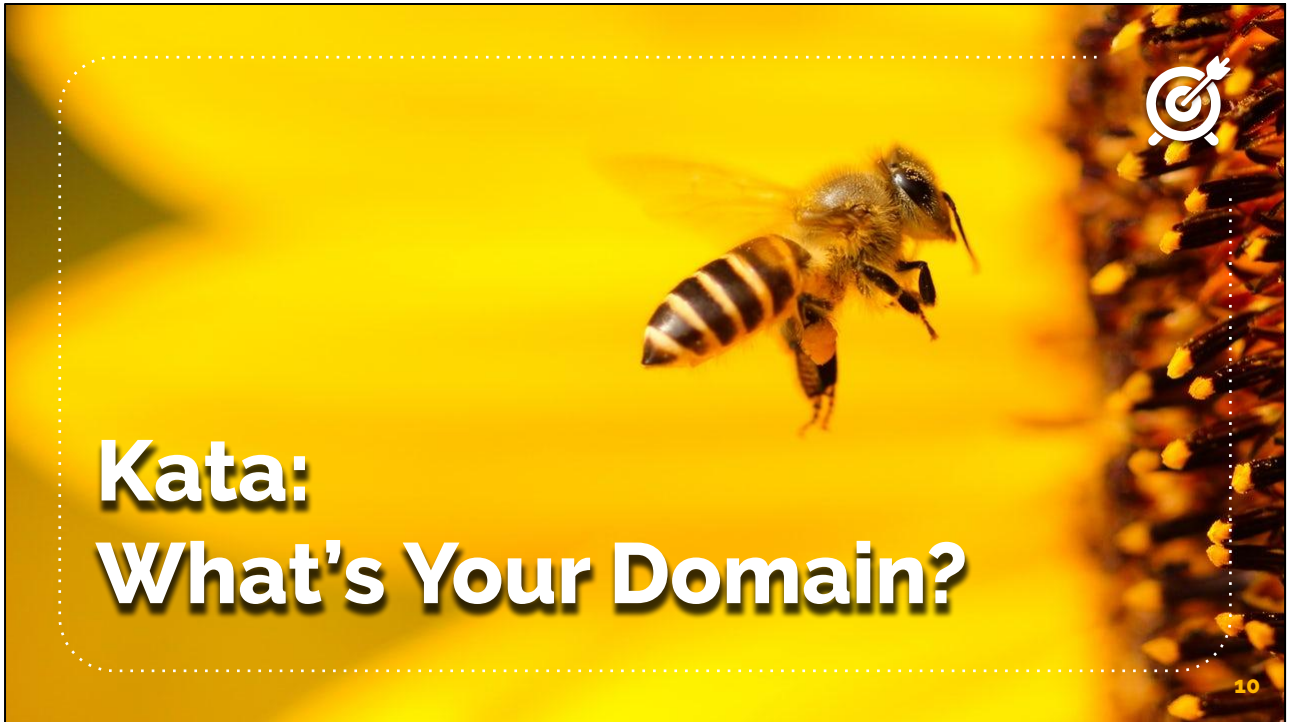
Domains



Industry, domain... sub domains... or specialties within a domain, can give you information about the domain, your competitors, and information about technologies to help you in that domain, either to develop it or test it. The internet is kinda awesome like that.



This example - you can see how I can drill down into a subdomain of games before I get to Unity. Unity is branching out into other things like film and automotive design, so I could easily develop a subdomain line from Movies or TV that drill into 3D graphics and then hit Unity from that direction.



Kata: What's Your Domain?

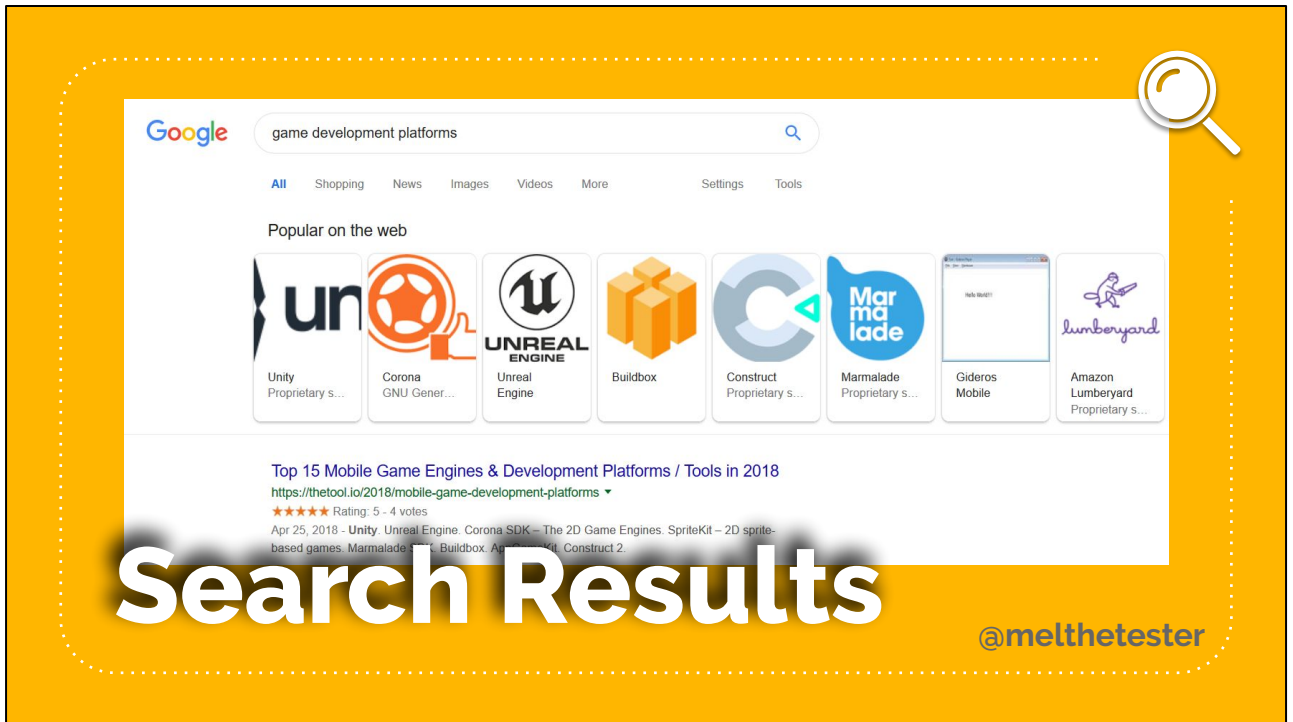
See if you can draw a mind map like the one I did for Unity. It doesn't have to be complex, but leave room to modify it. Raise your hand if you have any problems getting started, ask your neighbor. Let's do this in 30 seconds!

Done? Great! Put your industry/domain on your nametag! Sometime over the course of the conference during breaks, or later this week, find others that are in your industry/domain, or near it and have a chat!



Just look at the search list that comes up, don't click on anything, yet - what are some examples? Do you see more company websites or news articles? Do you see other companies mentioned? Do you see ads?

30 seconds on the clock - and go!



Entering the domain or the sub domain gets me some pretty interesting information right off the bat. One being that Unity seems to be first, followed by Corona, which is new since the last time I did this search. It was previously Unreal after Unity. Additionally, if I put this in another search engine, I might get a different result.

For example Bing shows me an alphabetical list of all the game engines I could possibly want to use and the primary language. Then there is a Slant article that lists Godot as the number one engine, followed by Unity, the Unreal. I haven't heard of Godot, but now I'm interested in finding out more.

DuckDuckGo: lists an article about Unreal first, then Unity

Kata: Find Your Competition



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Do you know who it is already?

Easy way to find it: Use the domain and sub domain to see what comes up in a search. (Remember the mind map you did earlier - use your keywords from that and see how much you can get. Just look at the different search list that comes up, don't click on anything, yet - what are some examples?

Do you see more company websites or news articles?

Do you see other companies mentioned?

Do you see ads?



If you haven't played with your own website first, do that. I'm talking about the company website... if the website is the company website, then all good, continue on. Do a quick scan and see what you can find that is different or acts different from your own. Do they make claims, do they slam you as the competition, are they bragging about new tech? Find out. You have 30 seconds.

If you only have their landing page or advertisement, that's OK. Poke around and see what they have.

Do they mention your employer as competition?

Are there articles and information on the site about what they are developing?

Can you download a trial version?

All of this information is how you can "super charge" your testing - when you are looking at new features and new workflows, or you've read something on a website about a piece of tech or a new framework, all of this can help and it can funnel back into the information you give and share with the rest of the team or even the whole organization.



Kata: Create A RSS Feed

If you don't already have access to a company RSS feed, or some place to post different news articles about your company or collect them, start building one. I have had this kind of service in some form or another at about every job I've had, with internal and external news.

What it gives me is good perspectives about what's happening with the company and what things are in development. It's crucial to follow articles about your domain, articles about your company and articles about your competitor. It can give you an idea of what things are coming up in particular areas.



Slackbot 11:24 PM

Valid commands: subscribe, list, remove, help.

To subscribe to a feed in this channel: /feed subscribe <http://kotaku.com/vip.xml>

To list subscribed feeds from this channel: /feed list

To remove a feed from this channel: /feed remove ID

RSS on Slack

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Slack makes it easy to set up an RSS feed. If you don't have an enterprise account, realize that your feed might disappear into the ether if you don't pay attention to it.

What other options might you come up with?

Reading the company newsletter

Reading progress reports from other departments

Reading a competitors RSS feed



A Tester's example

Why it might be important to pay attention to trends and news in your domain.



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When I was working on Education software, we were testing on Windows and Macs, and we didn't have a really good solution for iPads yet (which was a fatal business flaw after Apple dumped flash) and then another OS popped up on the scene. Schools were purchasing Chromebooks as fast as they could get them - why? They were cheap, you couldn't download anything to them really, the infrastructure was in the cloud and students could connect to any internet based application with them.

When I read about this trend, I lobbied to get Chromebooks added to the testing matrix because it was likely that schools were going to use them. In fact, they already were and there were a few areas which the application had problems with, but thankfully, over all, it worked, because we mostly tested a lot on Chrome browsers already, so we weren't very far off. When we finally did get Chromebooks, we were able to uncover the parts of the application that didn't hold up very well. Most of those defects had to do with resolutions.

If you are working on mobile, this is especially important. Even though the devices are expensive, it can mean loss of revenue if you don't have something to test on which you know your market is using.

My director at the time didn't think much about the problem. I pointed it out again when our own newsletter mentioned that a large district we supported was using Chromebooks and over 50% of the devices in the district were Chromebooks. Hopefully it doesn't take your company as long to spot trends like this, and if you are looking for them, it helps to raise the risk.

While this is a story about hardware, it doesn't have to be. What if there was a new browser, or a new software package update coming - you could set up an RSS feed to capture that information and let you know when an update was inbound. There was another story, different company, about iOS 9 - and the web team didn't know it was coming because we were focusing on Mac OS and mostly we only had to make sure the web version of the app worked on mobile. The Mobile app team knew about it. They knew it about 3 to 4 months in advance of the official release. They had tested with the new iOS and the mobile app was fine. When iOS 9 went live, doing automatic pushes, the web site stopped working on mobile devices. Not the mobile app, the main website. It was a solid few days of everyone scrambling to figure out why the website wasn't rendering on iOS 9. Once it was fixed, there was a lot of pointing fingers and such. After that, several different QA folks pledged to keep track of various package and software updates, even if they weren't exactly their main responsibility. That issue could have been avoided with an RSS feed or even occasional visits to various known software providers.

2



Two Definitions

What have you got to lose? Bee Yourself....

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Definition: **Persona**

From Google:

the aspect of someone's character that is presented to or perceived by others.

"her public persona"

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<https://www.merriam-webster.com/dictionary/profession>



Definition: **Role**

From Merriam-Webster:

2. a function or a part performed especially in a particular operation or process.

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<https://www.merriam-webster.com/dictionary/role>

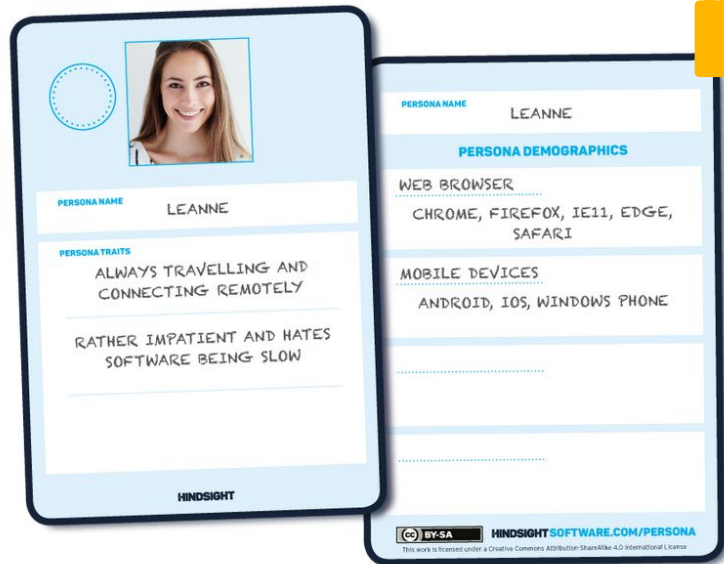
Kata: Write-up A Persona



Think about the definition and lets try to write one up - here are a few things to consider before we start the clock!



A Persona example



Sometimes it's hard to quantify these things, but people out there have made super helpful cards you can get from the internet. Check out the QR code for more details!



Things To Consider!

- Does your user speak English?
- Does your user need accessibility features?
- Do they use the mouse more than the keyboard or vice versa?
- Are you using biometrics of any kind? (ex: skin color, gender, age)
- What is the capability of the user? (ex: layman vs power user)
- What information can you assume the user already has or knows?
- What platform or device is the user working with?

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Ok ready - 30 seconds! Lets go!

Another Example



Katrina the Tester (aka Katrina Clokie) Has an awesome blog post with sample personas!

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Kata: Write-up A Role



Think about the definition of role - here are a few things to consider before you start -



A Role example



ROLES

ROLE NAME

CFO

RESPONSIBILITIES

PRODUCE CASH FLOW FORECASTS

OVERSEE PAYMENTS TO SUPPLIERS

FINANCE THE CONSTRUCTION OF NEW HOTELS

RELATED PERSONAS

HINDSIGHT



Sometimes it's hard to quantify these things, but people out there have made super helpful cards you can get from the internet. Check out the QR code for more details!

The backside of this card has a list for putting in pain points. So jot those down if you know them, or when you have a chance, see if you can interview someone who has the role you are considering.

Trick about roles - it could be a business role, or it could be an administrative role set up in the software. You'll want to consider where those two cross paths. It might be that the CFO's secretary has administrative rights right along with the CFO.



Things To Consider!

- What security might this role need?
- What level of access to sensitive materials might this role have?
- Is the role internal or external to the company?
- Is the role customer focused?
- Can the role grant access to other roles?
- What kinds of memberships/associations might a role have?

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Ok ready! 30 seconds - and go!!

Homework:



Data & Analytics

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Last but not least, get ahold of any data you can. Whether it's telling you the number of users a day, to what platforms they are using, to how many times someone looks at a particular page or does a particular workflow. Get this data and incorporate it into your testing plans.

Focus on the top ten devices and OS. Make sure you are coming up with scenarios that match the data you are seeing. Try to come up with new questions like - What time of day is our software often used, and on what days?

If your company doesn't have this information at the ready, this is a huge gap. Track down marketing and see if they have it.

EVERYBODY should have this information. Especially if you are an Enterprise based software company - your top ten accounts should be known to EVERYONE. Especially if those accounts require different reports or workflows, then it's critical that those are covered.

Unfortunately, these stats for Unity are considered trade secrets. I wasn't allowed to share with you percentages of who uses our software and with what platforms because that information is considered competitive. You might come up against that as well since there are some companies that do know what the information is worth. Do what you can to get some information, and then sign what you need to if it is considered trade secrets. The point is, having that information makes you a better, more informed tester.

Using Information



- Better prepared for changes to the software that might affect internal & external users.
- Better understand market pressures and market needs to help identify areas that might need improvement or innovation.
- Better understand users and their needs

Testers are in a unique position, especially armed with knowledge to recommend to PMs, PO, Devs, And stakeholders how certain commercial paradigms work.

If you have a dating app and you want to compete with other dating apps, you are likely going to use a similar swipe style as your competitor.

If you are a travel app, you'll want to make sure you are using maps displaying your locations to the user. You might come up with more innovative ways to let the user narrow down an area using touch screens for instance.

Playing with your competitors software lets you know where your software has gaps and differences. It lets you know what could be better. Combine this market knowledge and you, as a tester, are very well positioned to help in discussions when features are in the beginning stages, in the first stages of inception.

This is where you can leverage your knowledge to stop defects, to help users, and help your company add value.

Using Information



- Add value to business discussions
- Generate new and innovative business ideas
- Understand the different kinds of testing you might need to best deliver value.
- Use Data, Analytics, Monitoring, & Observation to drive development.

Testers are in a unique position, especially armed with knowledge to recommend to PMs, PO, Devs, And stakeholders how certain commercial paradigms work.

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Thanks!

You can find me at:

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Credits

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