Design with the User in Mind

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Hi,

I'm Alyshia Olsen. I'm am a User Experience Designer on the Tableau Product team.

I want you to raise your hand if you've ever used a Tableau Dashboard that made you feel confused or lost.

Be honest. I know I have.

It's not your fault

I have some good news for you

Its. Not. Your. Fault.

It's the dashboard designers fault.
Maybe you weren't intended audience for that confusing dashboard,
but
Maybe you were.
Maybe DashBrd designer didn't know what you needed

Today, I'm going to teach you how to to apply Design Thinking to Dashboard creation process so you don't make dashboards that make other people feel confused
..but what is UX design?

UX Design is about anticipating user needs

Actually about psychology –

and learning how other people think.

We're Figuring out how they approach problems they're trying to solve, and Giving them what they need before they know they need it..

[Pause]

Before I move on…

I want you to think about a dashboard you've used that you LOVED.

If you don't have a dashboard, think of something you use often. What do you like about it? Why?

[Pause]

It's usually a lot harder to come up with things we like, because they just WORK. We don't normally think about them, when, in fact, a lot more work goes into creating these types of experiences.

But designers aren't magical unicorns. We don't just KNOW what to create.

The Design Process

We use something called the design process to help us guide our thinking, and understand the people we are designing for.

Today, I will introduce you to the design process, and teach you how to apply this to YOUR dashboards, and make them more appropriate for your users.

[PAUSE]

Let's get started.
There are four parts of this process

The Design Process

?

Discover

**Who is using
this dashboard?**

First, we have Discover.

Understanding Who will be using this dashboard.

We're going to be gathering a lot of information from our users and discovering what they need to do with their data.

Next, (CLICK)

The Design Process

?

Discover

Who is using
this dashboard?

Distill

**What are their
main goals?**

Next, Distill phase.

We're finding patterns in our notes, and coming up with a few main goals our dashboard should accomplish.

Once we've settled on goals, we move on to (click)

The Design Process

? **Discover**
Who is using
this dashboard?

▼ **Distill**
What are their
main goals?

💡 **Ideate**
**How can I
enable their
success?**

Ideate.

During Ideation, we are Finding Creative solutions to those goals we decided on, and moving from a list of goals, to a dashboard that accomplishes them

Towards the end of this phase we will start filtering, but

The time for a more critical eye is the final phase (click)

The Design Process

?

Discover

Who is using
this dashboard?

▼

Distill

What are their
main goals?

💡

Ideate

How can I
enable their
success?

✔

Validate

**Where can I
improve the
dashboard?**

Validate.

Looking at where we can improve this dashboard to better align what our users need.

Ideally, you'll be engaging with your users again to understand what doesn't click for them.

A great way to think about this process is...

The first two phases are about making sure we're solving the right problem. If we skip this, we might come up with a really great dashboard that addresses the wrong things.

The last two phases are about making sure we solve the problem the right way, once we know what our focus is.

During this talk I have a section on each of these where I'm going to give you a few important things to keep in mind,
as well as a couple techniques you can apply during your dashboard creation process.
You're going to leave the room today with the ability to think like a designer.

But before jumping right into the "Discover" section...

Finding your User

Knowing who to talk to is just as important as talking to them.

I've mentioned your "user" a few times, and I want to take a moment to define who this is.

Tell you a story.

This is my dad.

as you can tell - mechanic

A few years ago, my dad finally decided he was getting an iphone.
He spent a while looking at the specs and deciding what he wanted. One thing he decided on pretty quickly was that he was buying a case with this phone,
because he didn't want to worry about it getting damaged in shop
Any guesses on what kind of case he bought?

It protected an expensive piece of equipment that he'd spent a long time deciding to buy.

I definitely made fun of my dad's choice in iphone case at the time

– the case he chose made the phone harder to use.

Dedication to otterbox was only strengthened when he lost his phone later that year..

The phone was nowhere to be found. Until the next Sunday when my dad mowed the lawn. Now...my parents live in Florida...and they get a lot of rain.

I knew how much he liked that new phone. I offered to mail him one of my old phones since he'd just broken his.

Dad just laughed at me. The phone WORKS. It's fine, he tells me. OtterBox has a customer for life.

Now...(click)

There are TONS of companies who make iphone cases. This picture shows a subset of them. Many of these would be terrible for my dad.

But, none of these cases are inherently BAD cases. They're just made of people who are NOT my dad. Just like the Otter case my dad has isn't made for me.

So I made a mistake when I was talking to my dad about his phone case

You are not the user

I incorrectly assumed that since I also had an iPhone, I was a representative user…but I'm not. Even though we are both iPhone users…we're very different people.

This story illustrates how important it is to know who you are designing for, and to know what their goals are for the dashboard you're designing.

You'll probably also run into more people who seem like they might be the user…but aren't.
You may have seen these guys before…. *click*

They're pretty uppity, not totally in touch with the people who are doing most of the work..and they think they're more important than they actually are. HIPPO stands for (click)

Highly Paid Person's Opinion.

Now...many times, these opinions are going to come from a manager or representative of a team that's asking you for a dashboard.

But it's important to remember when you're getting information about what needs to be in the dashboard
...this person is not a user

Customers are not the user

...they're a CUSTOMER.
A customer is someone who has a stake in the dashboard being created but isn't really going to be using it much. They might have their own set of requirements, which are fine to be aware of...but make sure they're not the only person you're talking to.

Your user is the person who is going to be using this dashboard more than anyone else. It's not you. it's not your Hippo.

So...now that we know who we are going to talk to, let's

? Discover   **▼** Distill   Ideate   **✓** Validate

go back to those four phases.

Rest of talk I'll be walking through each of them in more detail.

Discover

If I had asked people what they wanted, they would have said faster horses.

Henry Ford

During the discover phase, our goal is to find out what our users really need.

Any they can be misleading, because they'll try to solve their own problems and tell you what solution they are interested in.
Your job is to take solutions they're giving you and figure out problems trying to solve.

During this phase, we want to make sure we

Question the obvious

The Five Whys

?

It's called THE.Five. Whys.

Now this technique is exactly what it sounds like. We're going to ask WHY five times.

And the goal here not to act like a two year old.
it's more of a guideline to get YOU to push yourself beyond the obvious...ask stupid questions...and get to the root of what your user is asking for.

This example is centered around a friend of my dad's – Mr. Massey. He owns a Toyota dealership. (click)

The Five Whys

Massey Toyota.

John Massey wanted a dashboard to help him make business decisions about his shop. *click*

We're going to walk through the user interview process using the 5 whys as an example...

The Five Whys

Year and Make of vehicle over time

? ▼ 💡 ✓

Originally, he asked me for a dashboard that shows the Year and Make of vehicles over time.

First...I asked him why he needed to see this information.

Well, that's obvious, he told me. I need to *click*

The Five Whys

Year and Make of vehicle over time

↓ 1

Understand what cars are coming into the shop

? ▼ ⚲ ✓

Understand what cars are coming into my shop.

Now, I could have stopped here. I could have figured that I had just asked a stupid question and got on with building the dashboard. It would've looked like this *click*
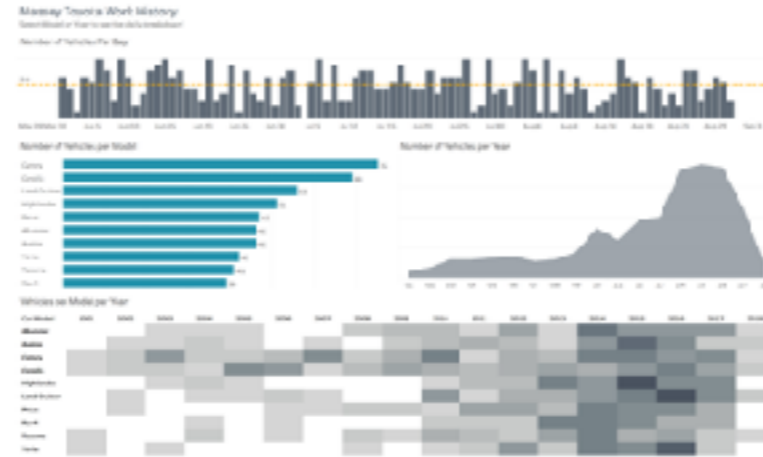
Dashboard like this that optimizes for what cars are coming into the shop and allows the user to explore.

That's exactly what they asked for. A lot of us probably do stop here.

It even does more than he expected it to do (he's only seen static dashboards before) – and here he can click on PRIUS (click)

For example, and the rest of the dashboard filters to help him understand the distribution of prius' coming into the shop.

But...if we keep asking questions about the purpose here, we can do better. I'll show you how.

Instead of giving him this dashboard, I asked him

Why do you need to understand what cars are coming into the shop...?

The Five Whys

Year and Make of vehicle over time

1

Understand what cars are coming into the shop

2

Figure out what parts to keep on hand

? ▼ 💡 ✓

What John told me was that he is trying to figure out what parts he need to keep on hand.

Some of them are pretty expensive, but if he is going through them consistently, he wants them around.

OK...So that's a new insight we have here.

It sounds like this dashboard shouldn't be about the cars so much as it is what parts are sitting in the shop. Totally different dashboard we could build.

But...a few things came to my mind when considering why this might be. Take a second and consider why this might have been important to him
{SIP OF WATER GIRL}

The first thing that came to my mind was cost *click*

The Five Whys

Year and Make of vehicle over time

1

Understand what cars are coming into the shop

2

Cost?

Figure out what parts to keep on hand

?

It sounded like he didn't want to have cash tied up in parts if he wasn't going to be using them.

The second thing was efficiency *click*

The Five Whys

Year and Make of vehicle over time

1

Understand what cars are coming into the shop

2

Cost?
Efficiency?

Figure out what parts to keep on hand

?

If parts aren't on hand, he'd have to order them.

He kind of talked about both of these things, but I'm not sure how much each of these is a factor in what he's looking for.

At this point, I could just ask him directly about cost of parts vs. efficiency of shop and what he'd like in his dashboard, but that's a bit of a leading question since it doesn't leave much room for the answer to be about something else.

bring to another point

Keep questions open-ended

?

try not to ask questions that encourage people to give one of a few answers.

Keep the questions open ended.
also includes yes or no questions,

Instead, I'm going to stick to the script and ask him WHY he needs to know what parts to keep on hand

The Five Whys

Year and Make of vehicle over time
1
Understand what cars are coming into the shop
2
Figure out what parts to keep on hand
3
Cost?
Efficiency
Know when a vehicle is waiting on a part shipment

?

John said that he'd like more information about when vehicles are waiting on part shipments.

More about efficiency

At this point, it feels like we're really starting to get to a better understanding of what our user wants to get out of his data. But we've got two more Whys to ask. I'll go through these a little faster since I think you're starting to get the point.

{small pause}

When I asked why it's important to know when vehicles are waiting on part shipments, what I heard was that it's not just about parts.

click.

The Five Whys

Year and Make of vehicle over time

1

Understand what cars are coming into the shop

2

Figure out what parts to keep on hand

3

Know when a vehicle is waiting on a part shipment

4

Understand when a vehicle isn't being worked on actively

? ▼ 🔦 ✓

It's about any time a vehicle isn't being actively worked on.

It turns out there are a few reasons this can happen, and one of them is that the shop is waiting on a part shipment, but there are a few other things we could show in this dashboard as well.
click

The Five Whys

Year and Make of vehicle over time

⬇ 1

Understand what cars are coming into the shop

⬇ 2

Figure out what parts to keep on hand

⬇ 3

Know when a vehicle is waiting on a part shipment

⬇ 4

Understand when a vehicle isn't being worked on actively

⬇ 5

Eliminate wasted time

? ▽ 💡 ✓
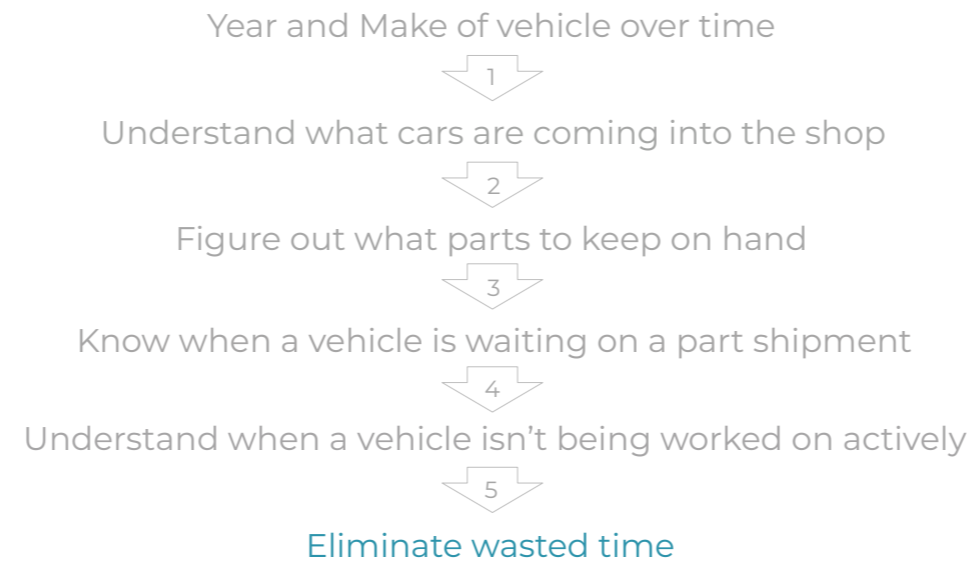
Finally, when I asked why that was important to him, he told me he wants to eliminate wasted time in his shop.

Just take a moment and look at the series of answers John gave me.

So – given everything we've found out...here's the dashboard I actually made him. *click*
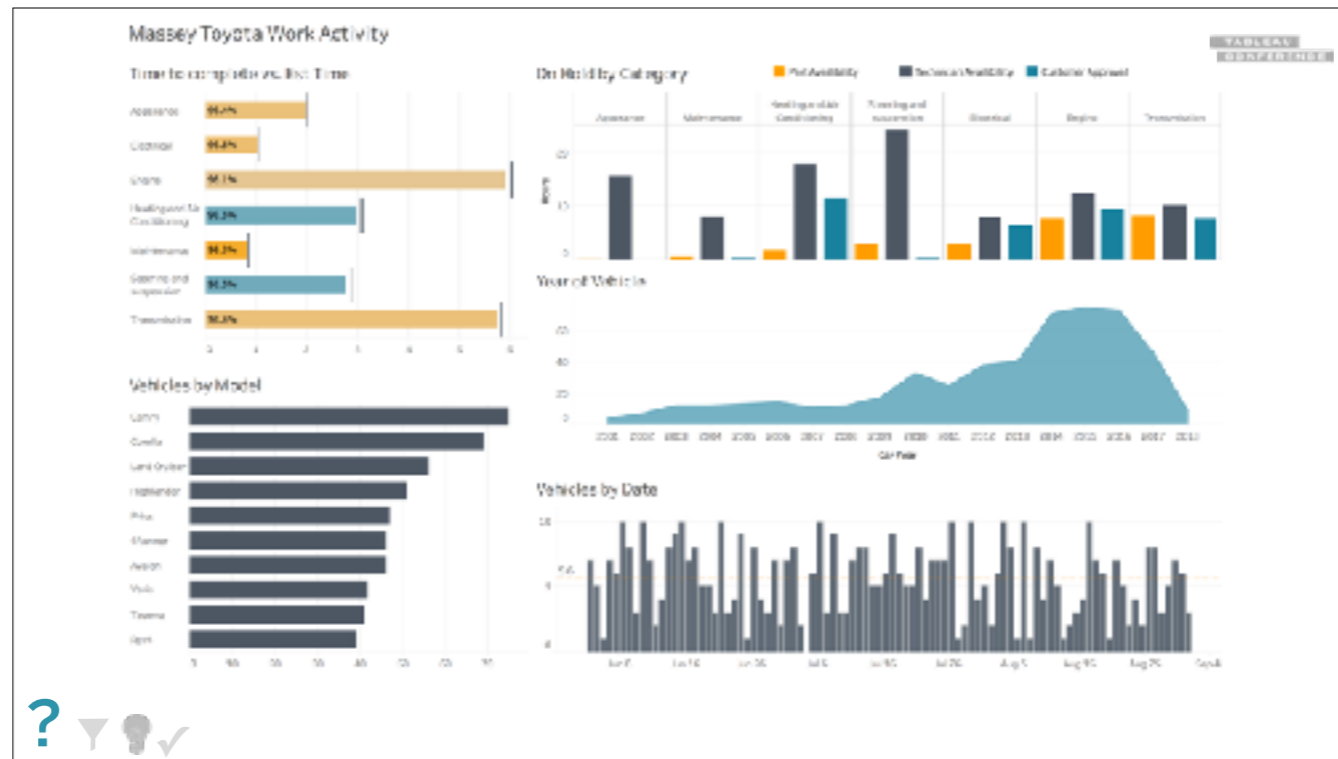
It does a much better job of addressing his problems.

You can see some charts still there

Massey Toyota Work Activity
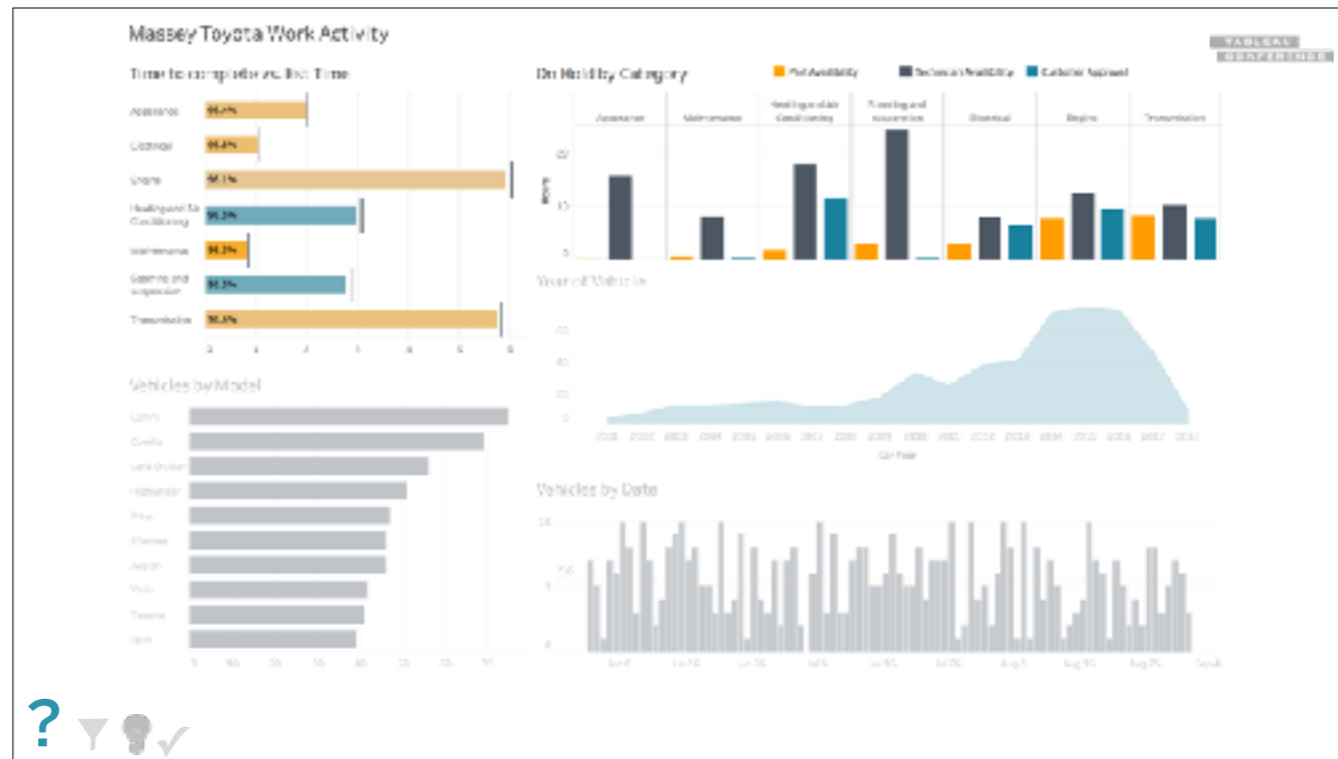
Two new ones

 one on left shows efficiency broke down by job type.

And even though it was more work than the original, we saved ourselves some time in the long run, because I'm SURE Mr. Massey would've come back to me within a week of having the original dashboard and asked for more views. And then I would've had to context switch and get ramped up on the data set all over again.

"the five why's" isn't a cut and dry technique - it's more of a guideline. Usually I continue to dig into "why" until I feel like I'm not getting anywhere anymore. Or until I *already knew the answer* to about 2 questions in a row :D.

A lot of ways to have conversations and get more out of your users

Contextual Inquiry (ask how they do it today)

? ▼ 💡 ✓

Contextual Inquiry. But that's just a fancy term that means "Watch them do their job today, and ask them questions about it while they're doing it".

If you're going to use this technique, it's important to make your users feel comfortable.
Sometimes people may think you're coming in to evaluate how well they're doing their job; so give them information about why you're really there, and ask them to teach you how to do things if you don't understand what's going on.
At the end of this, you want to know what it feels like to be the user.

A great example of the power of this technique comes from a design firm called Ideo

Contextual Inquiry (ask how they do it today)

IDEO

? ▽ 💡 ✓

They were asked by a medical device producer to design a device that nurses would use to enter data during a specific medical procedure. They had a vision of a sleek gadget – kind of like an iPad, that nurses would use with two hands during this operation (click)

Contextual Inquiry (ask how they do it today)

Now, when they spoke with the nurses about the concept – the nurses were on board.

But when the designers from IDEO observed the nurses during the procedure, they noticed something important…

Contextual Inquiry (ask how they do it today)

The first thing the nurses did was hold the patients hand.

The patient happened to be conscious during this operation, and they were usually scared. This basic, human interaction was so intuitive that nobody remembered it was something that they did during the interview process.

Contextual Inquiry (ask how they do it today)

? ▼ 💡 ✓

here's device they designed

one handed. buttons on side.
Not sleek or sexy, but it does the job well.
that's important.

One final point to make

Have conversations, not interviews.

While it IS a great idea to have a set of questions you want to make sure you ask your users, don't keep the conversation too directed.
This is a chance for you to get to know them better.

?

Discover

Who is using
this dashboard?

Once we've finished Discovery,

should have good idea of who are user is, and a TON of ideas are probably starting to form about how to solve our users problems.
At this point, I've usually started to sketch out half-formed ideas of visualizations that my user might want.

But, trying to build everything they've asked for
or we have come up with
can lead to
dashboards like this
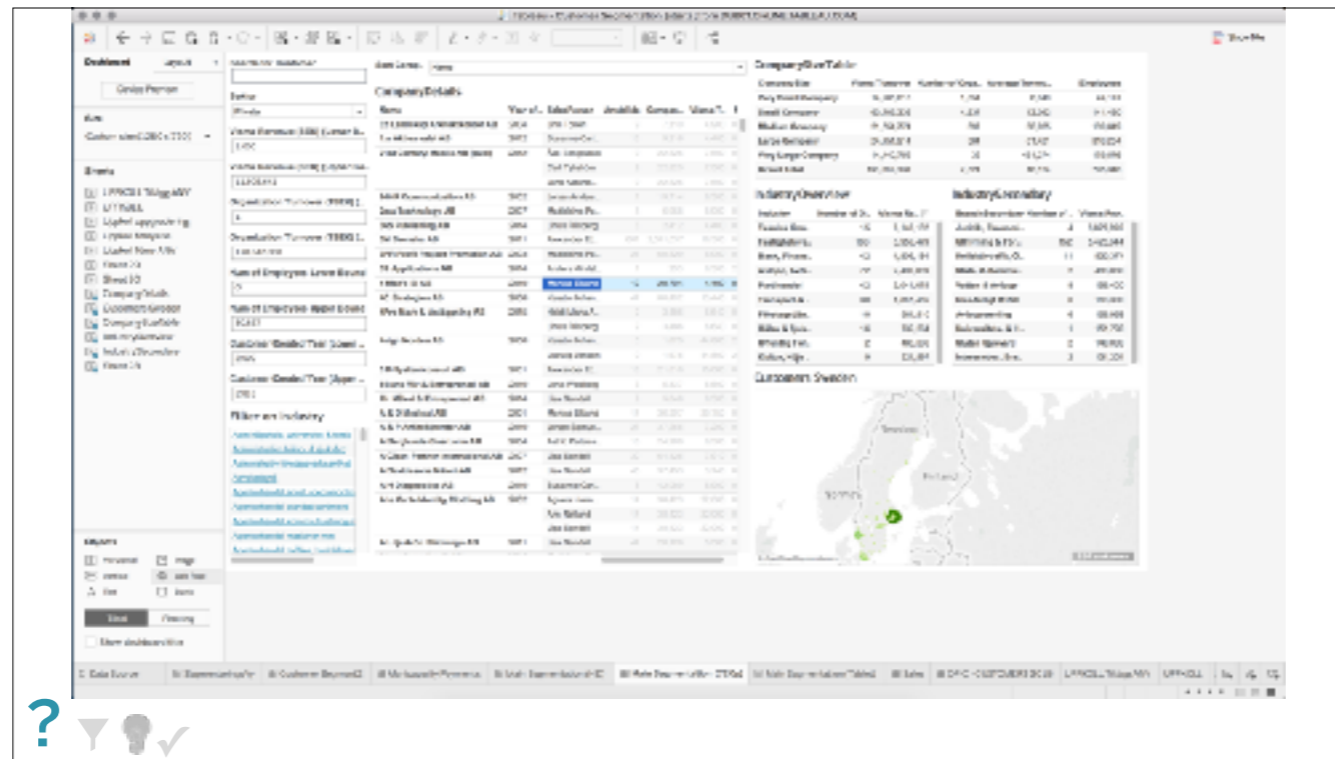
This workbook has a ton of dashboards and sheets in it –

but has a learning curve to find what you're looking for unless you're the person who built it.

When you do a few user interviews but don't have your own perspective at the end of it…you can end up trying to do everything all at once.

And, while there are places where this could be appropriate…

9 times of 10 not what you want.

This is why the next Phase *distill*

click

Distill

Do not try to do everything. Do one thing well.

Steve Jobs

Is important.

This phase is where we take a step back and develop a perspective about goals

Here we are going to decide what to do, and what not to do.

Notes from users
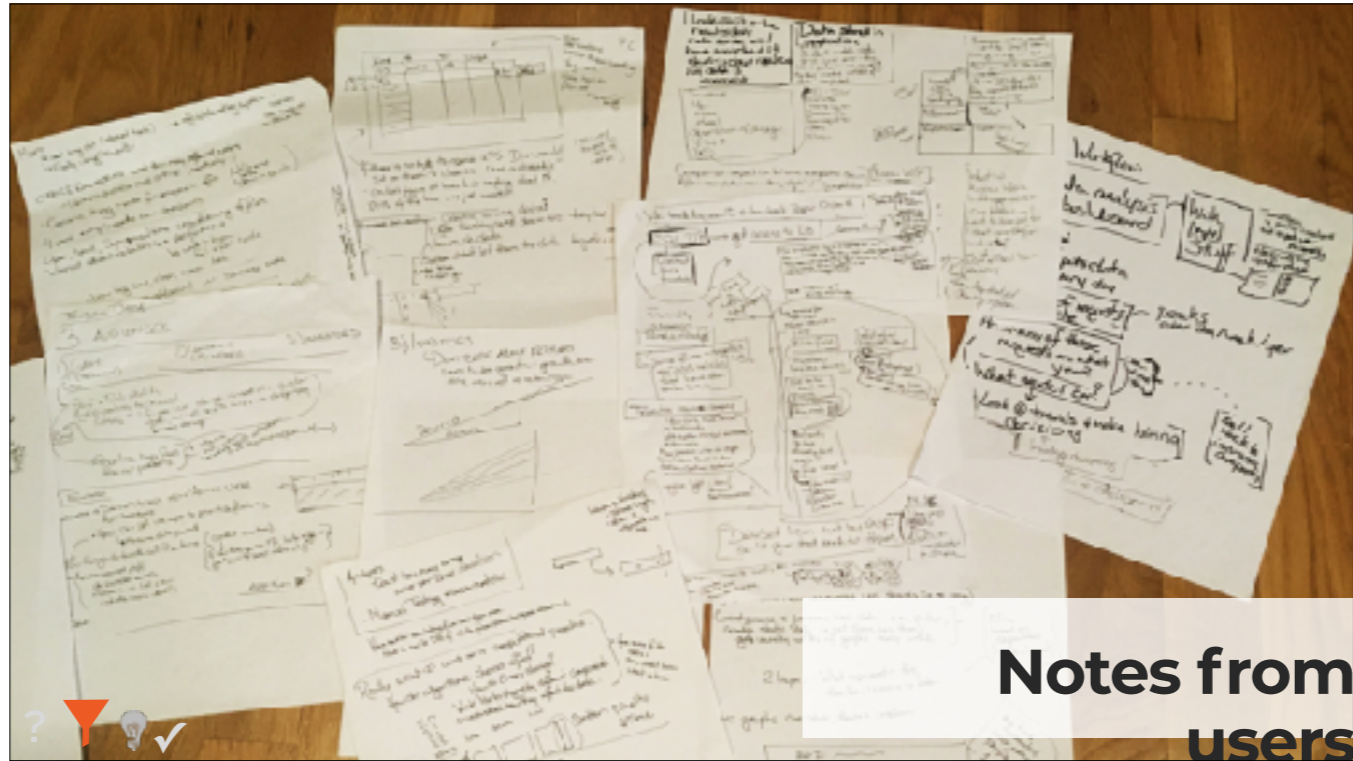
Beginning

we're starting with notes

This is an example of what my notes typically look like. This is from One User.

Build what they need
Not what they want

Focusing on what they need. Not what they want.

I've heard a lot of stories about people asking for tables.
Our notes might have a lot of requests for tables or specific views.
If you've asked WHY during discover – you'll be able to
understand the reasons people wanted these views,
pull
 into your goals in this phase so you can address the real reason your user wanted something like a table.

Instead of going right from notes to a dashboard, we'll answer …

Solving the right problem

Who are your users?

What will they do with the dashboard?
What are we explicitly NOT building?

By end of this phase
Answers to each of these questions

Why are we doing this?
Because these are going to help us stay sane, and guide us when we're brainstorming and putting together our dashboard.
They are going to serve as the first bar all our ideas need to pass to make it.

Sometimes, it's easy to come up with answers to these questions –
ex – WHO – for DB with John, it's "john", but with dashboards who have multiple people, it might be "Employees who are travelling" or "Conference attendees looking for the best food in the city"

Even with all the notes from your users interviews in front of you, Coming up with those more nuanced answers can feel arbitrary.
That's why I give it a little more structure, by

Look for insights

? ▼ 💡 ✓

Starting out looking for insights.

These insights are going to help us find answers to our questions.
Distill phase we go from Notes to Insights to Goals.

Insights may be things like "My users look at Tableau in every meeting for answers", or "My users like to screen-cap dashboard examples and send them around on slack".

I'm going to show you TWO visual techniques that are really helpful when going from notes to insights.
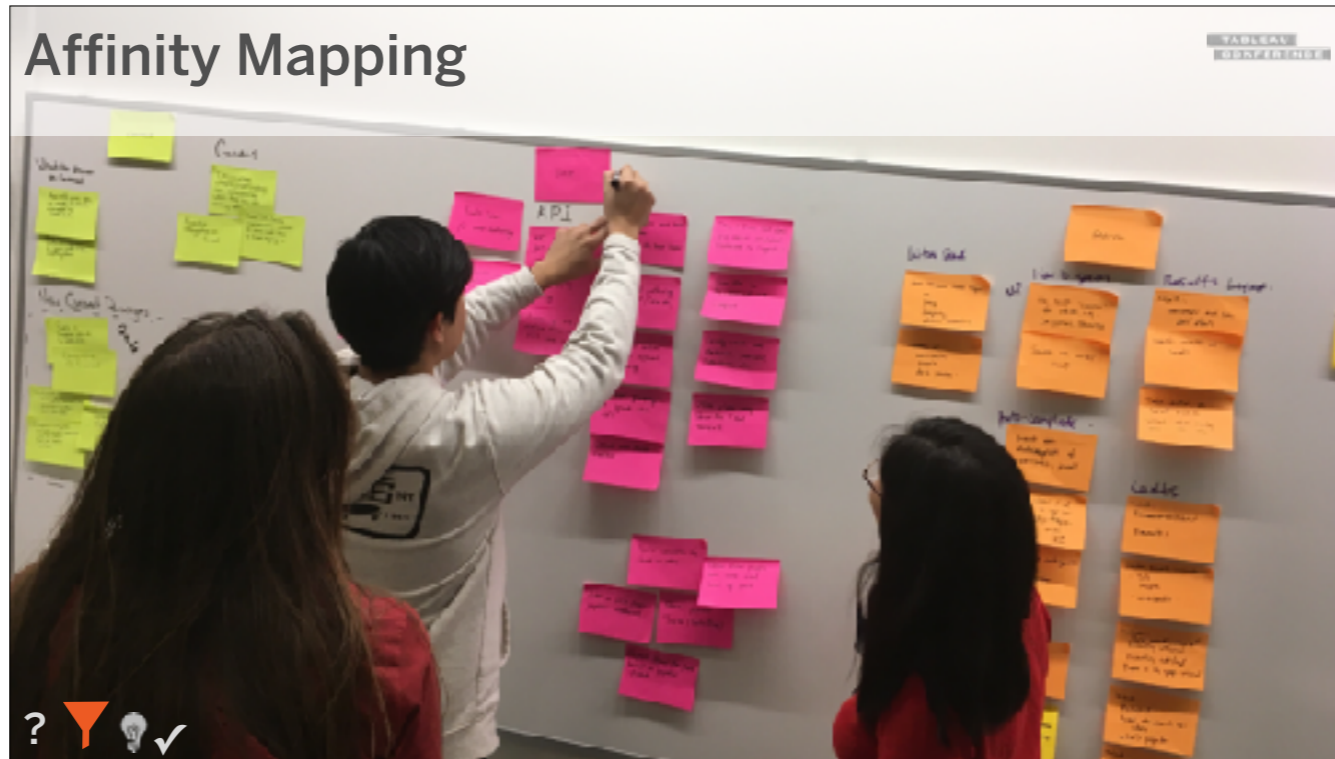
Affinity mapping.

Great technique. Help organize your notes visually, understand bigger areas of interest for your users,
sift through a lot of information.

What you're going to do is
Write each "note" down on a sticky note or notecard.
Don't stress too much about what a note is. The goal is to get all the different pieces of information you gathered in a format where you can organize them and move them around.

Next, we will group these visually. Here's how it works.

Affinity Mapping

not sure what's
happening, but
feels like things
get stuck in
holding pattern
sometimes

? ▼ 💡 ✓

This is a note I took from my conversation with John.
Pretty stream of consicousness

don't have any categories yet – so give it one.
Seems like it's about jobs stagnating.

Affinity Mapping

Stagnation

not sure what's
happening, but
feels like things
get stuck in
holding pattern
sometimes

? ✓

call this group stagnation

next

Affinity Mapping

Stagnation

not sure what's
happening, but
feels like things
get stuck in
holding pattern
sometimes

how do I know if
it's an exception or
a trend?

? ✓

I pulled up the another note.

This one seems like it was about looking for outliers

Affinity Mapping

Stagnation

not sure what's
happening, but
feels like things
get stuck in
holding pattern
sometimes

Outliers

how do I know if
it's an exception or
a trend?

And gave it a new category – understanding outliers

Affinity Mapping

Stagnation

Thinks maybe holding pattern is due to parts and incorrect orders

not sure what's happening, but feels like things get stuck in holding pattern sometimes

also want to know in general how we are tracking against ourselves

Time variables

does time of year affect efficiency?

seems to get worse in late spring. How can I handle this?

Other Info

Estimating Time

estimates are based on flat rate hour pay for a job

Model/ Year variables

feels like some model/year combos are more problematic - not sure if this is true

Seeing more prius' than usual, not sure how many

Employees

can't really tell who is better at which job

do I need to hire more people?

wants to be able to train, grow employees. Not sure how.

do my mechanics need more training?

On Hold

could be part shipments. This is suspected problem.

could be technician availability. But thinks he has enough technicians

car could be on hold because customer didn't pick it up

Outliers

how do I know if it's an exception or a trend?

somtimes something is just a fluke

if there's abnormal data want to know more information about it

Suppliers

it's difficult to keep everything on hand. there's just not space for large parts.

which supplier is better?

Continue till all the notes are on board.

Now it's really easy to see a map of our whole conversation.
I used this map to help me understand what was – and wasn't – as important to John, and inform the goals that I wanted to accomplish for his dashboard.

Affinity Mapping

Stagnation

Thinks maybe holding pattern is due to parts and incorrect orders

not sure what's happening, but feels like things get stuck in holding pattern sometimes

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if there's abnormal data want to know more information about it

Suppliers

it's difficult to keep everything on hand. there's just not space for large parts.

which supplier is better?

Example – John really needed to understand outliers in his data. We talked about this a lot, and I made it an explicit goal for this dashboard to really allow exploration, filtering, and give him more low-level data when he asked for it.

Pattern Identification

? ▼ 💡 ✓

Run thru one more technique.

Pattern Identification.

Another visual technique that will help you see patterns in your notes.
This one is useful when you have 3 or more users, because it really helps you understand how your users are similar to, or different from each other.

Will use a different case study to walk you thru this.

Pattern Identification

Tableau eLearning

You may have heard of the new Tableau eLearning program. It's a program that lets anyone take a more targeted Tableau class online rather than needing to schedule a more intensive and expensive in-person session.

We wanted to make sure that while we were offering this new program, we weren't losing our overall revenue.
Exec team asked for a dashboard to help them understand how the program was going, so we can make improvements along the way if needed.

So first,

**click*

Pattern Identification
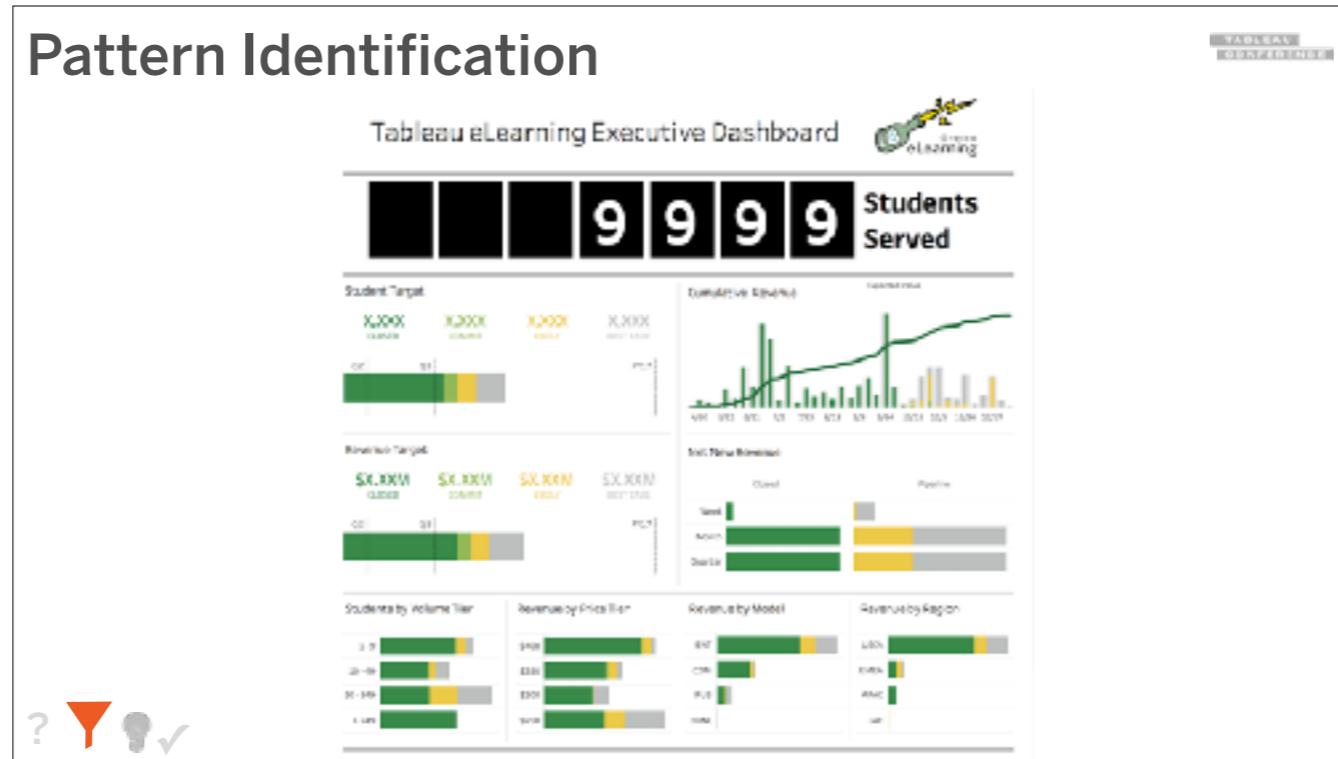
For context, Here's the dashboard we ended up with.

Let's walk through how we went from notes to goals and ultimately got to this dashboard.

We interviewed three execs at Tableau who were going to be using this dashboard,

We asked them a few questions about how they use their dashboards and interact with their data today, as well as asking about how this might fit into their workflow; when they thought they'd use it,

Andre

The first person we interviewed was Andre.

He's in charge of the training at Tableau.

Interviewee	Notes		
Andre	Always running between meetings	Frequently updates exec team about eLearning	Wants to have numbers top of mind

? ▼ 💡 ✓

We had quite a few takeaways – but here is a subset of them.

We also interviewed Beth

Interviewee	Notes		
Andre	Always running between meetings	Frequently updates exec team about eLearning	Wants to have numbers top of mind
Beth			

? ▼ ✓

Now, she manages the sales group for tableau trainings.

Interviewee	Notes		
Andre	Always running between meetings	Frequently updates exec team about eLearning	Wants to have numbers top of mind
Beth	Keeps Salesforce dashboard open in Desktop	Looked up dashboard name in email thread	Celebrates big wins with team

? ▼ ✓

A few takeaways from her interview are here.

Andre	Always running between meetings	Frequently updates exec team about eLearning	Wants to have numbers top of mind
Beth	Keeps Salesforce dashboard open in Desktop	Looked up dashboard name in email thread	Celebrates big wins with team
Charles			

? ✓

Finally. We interviewed Charles. Not an exec, but works with the team quite a bit.

Here are a few takeaways from his interview *click*

Interviewee	Notes		
Andre	Always running between meetings	Frequently updates exec team about eLearning	Wants to have numbers top of mind
Beth	Keeps Salesforce dashboard open in Desktop	Looked up dashboard name in email thread	Celebrates big wins with team
Charles	Emails data to CFO weekly	Prep for meetings using data	Gets asked for email updates frequently

So...what we did here was look at all of our notes

Different from Affinity mapping because we're keeping everything organized by users – focusing instead on how they are similar to each other.

looking for patterns

One thing we noticed was:

Interviewee	Notes		
Andre	Always running between meetings	Frequently updates exec team about eLearning	Wants to have numbers top of mind
Beth	Keeps Salesforce dashboard open in Desktop	Looked up dashboard name in email thread	Celebrates big wins with team
Charles	**Emails data to CFO weekly**	Prep for meetings using data	Gets asked for email updates frequently

There's a common thread with our execs about being too busy to really know how to understand where all the dashboards are on server, and because of this they didn't check the actual dashboards as often as they wanted to. *click*

Interviewee	Notes		
Andre	Always running between meetings	Frequently updates exec team about eLearning	Wants to have numbers top of mind
Beth	Keeps Salesforce dashboard open in Desktop	Looked up dashboard name in email thread	Celebrates big wins with team
Charles	Emails data to CFO weekly	Prep for meetings using data	Gets asked for email updates frequently

Many of these users don't check their dashboards as often as they'd like

Things change too fast, and they have too much going on... but they did genuinely want to stay updated.

We obviously took more notes than I can fit on this slide, but I want to speak to how we distilled that information a little more.

So – using all of our notes with this technique, we found a few insights

Pattern Identification - Insights

Users don't check dashboard
as often as they'd like

Generally communicate via
email and use mobile often

Don't need ability to
explore data in-depth

Here are some of those the insights written out.

TAKE A DRINK OF WATER.

LET THEM READ THE DAMN SLIDE.

Translated these into some of our goals

Pattern Identification - Goals

Users don't check dashboard
as often as they'd like

Generally communicate via
email and use mobile often

**Get insights without
disrupting existing flow**

Don't need ability to
explore data in-depth

**Dashboard doesn't need
to encourage exploration**

TAKE A DRINK OF WATER.

LET THEM READ THE DAMN SLIDE.

I want to point out two things.
One – each insight doesn't need to map to one goal. The can be grouped, or split.

Two – these goals don't say HOW we are going to do them. That's purposeful.

We used these goals to inform the final dashboard.
click

Goals

Get insights without disrupting existing flow

Dashboard doesn't need to encourage exploration
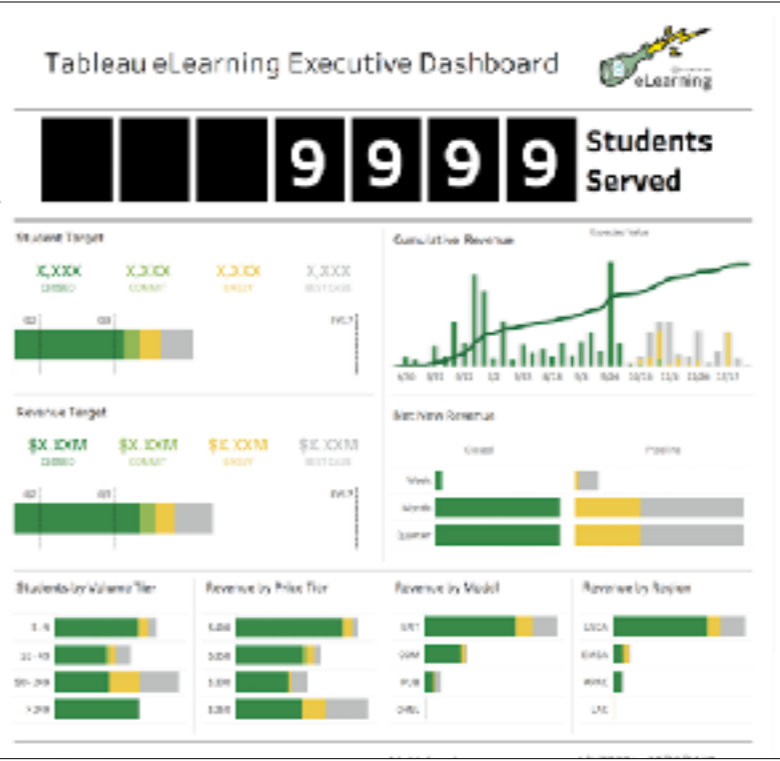
Here it is again. In order to address these goals, we did a few things.

Formatted for email and mobile
Most important info at top
All info up front

Goals

Get insights without disrupting existing flow

Dashboard doesn't need to encourage exploration

Communicate big wins
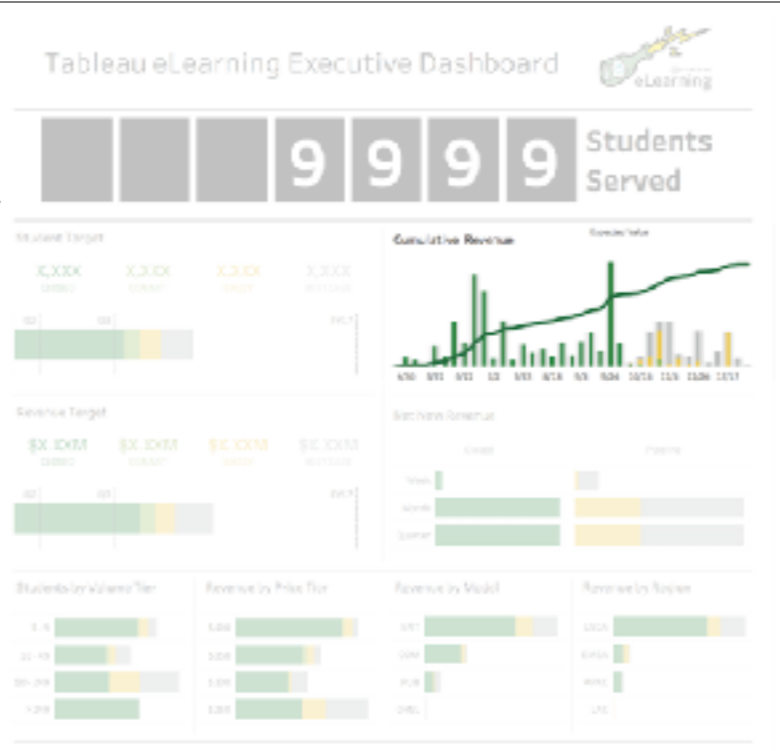
Two more goals.

Communicate big wins – done by

If we scroll down to the bottom we can seem more about the top deals and impact of elearning on total revenue – as expected, it's actually improved the bottom line while helping people.

One last thought is that

Remember that you may have multiple user types

1)   Final thought here - During pattern identification you might find that you have groups of users who act differently than others.

2) Might make multiple dashboards
3) Might prioritize one user over another (that's fine, there are tradeoffs)
4) Might make use of interactivity to show more detailed content on-click to different users

The Design Process

?

Discover   **Distill**

Who is using   What are their
this dashboard?   main goals?

Solve the right problem
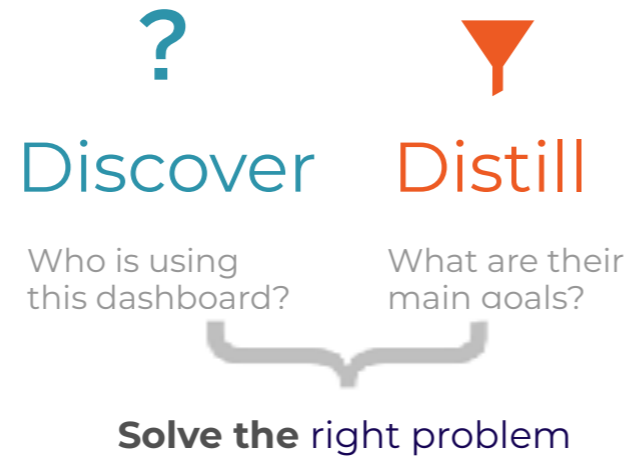
Once we have finished distill phase – should feel pretty confident in our set of goals, and know that we're solving the right problems for our users.

During the second half of the process – solving problem RIGHT.
Tends to be more fuzzy, and more iterative than 1st two. Will expect to kind of go back and forth between ideate and validate a bit more,
and we are going to keep referencing the work we did in the first half of this process – because it helps keep us on track.

next we move to Ideate –

Ideate

The first idea is often not the best idea.

This is where we take all those goals and determine HOW we are going to address them in a dashboard.

This is a HUGE PHASE
We are going to start with a set of goals.
You're going to end with either a prototype of a dashboard, or an actual draft of a dashboard in Tableau.

If you're building dashboards,
you're ideating already.

Write everything down

? ▼ 💡 ✓

First,

Don't pretend you haven't started brainstorming already.

It's really hard NOT to start coming up with solutions during the first half of the process – it's just what we like to do.

Write all your stuff down. Put it aside

Then your list of goals in front of you.

Next - we're going to push ourselves beyond those first ideas we came up with.

Lot of techniques here but I'll give you two

Frst tool is called

Crazy Eights
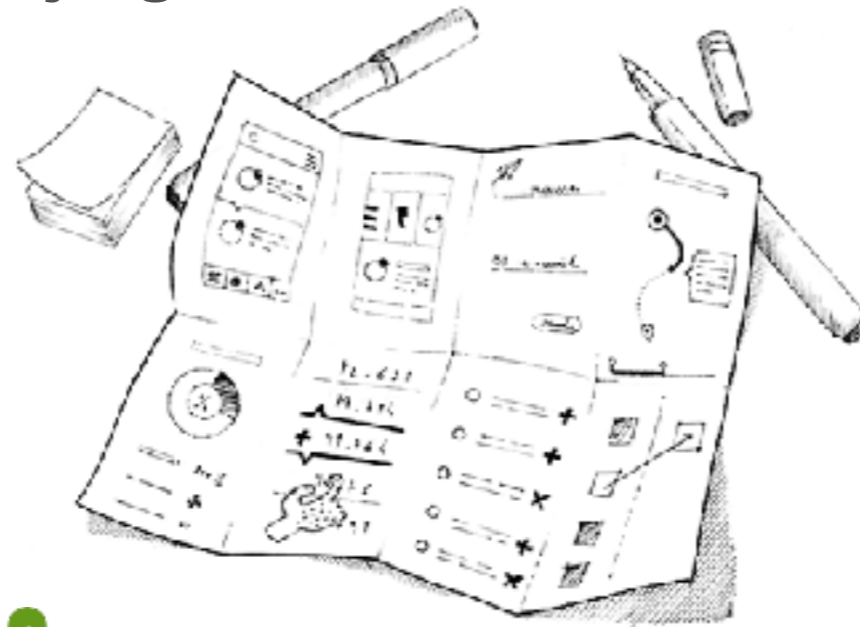
Illustration by Lucia Ferro

First one – crazy eights

Crazy Eights
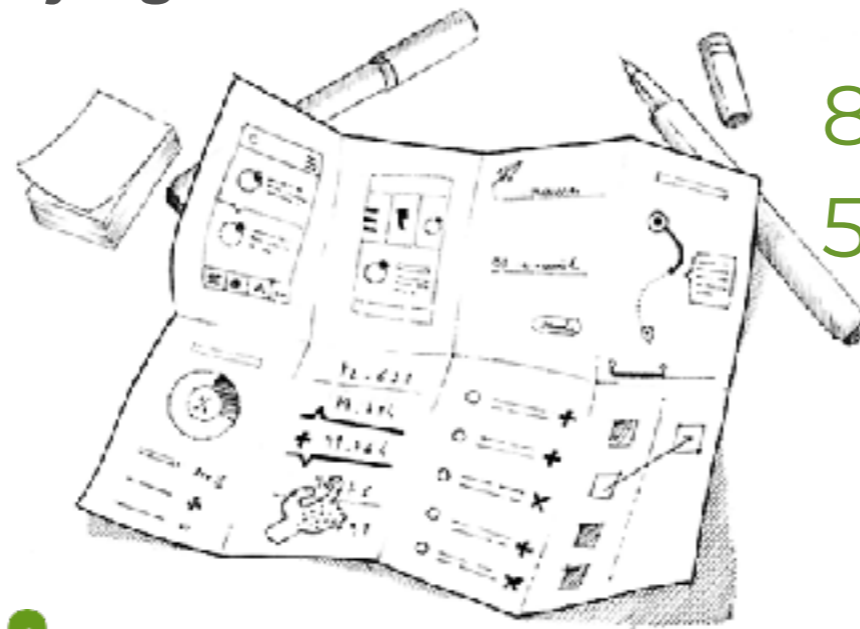
8 Ideas
5 Minutes

Illustration by Lucia Ferro

What you do here is come up with 8 ideas .... in 5 minutes. 8...DIFFERENT ideas – not riffs on one idea.

It might seem like a silly exercise, but there's a good reason we do it.
One thing our brains like to do is start judging our thoughts and ideas as soon as we have them. We'll say
"oh...that's not good enough to write down", or "thats OK...but does it make the cut?". When we have 5 minutes...EVERYTHING makes the cut – we dont have time to filter ourselves.

Usually the first 2-3 ideas are the easy-lazy things we think of...but then we start to push ourselves.
you might surprise yourself.
The next technique *CLICK*
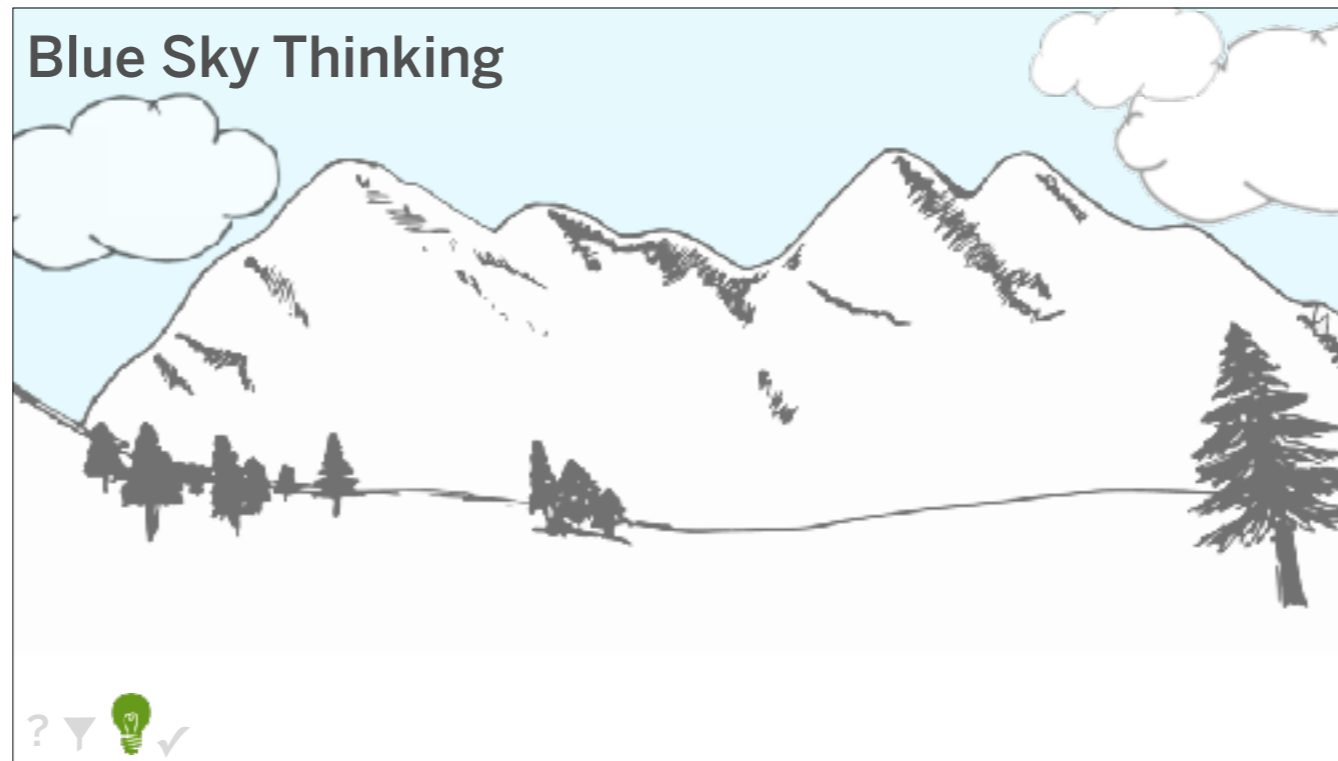
Blue Sky Thinking

Is called Blue Sky Thinking.

This is a little bit more structured - and this is another great option.

Blue sky thinking encourages creativity by forcing us to combine the mundane and fantastical.

click

The first thing we do is come up with a "Ground" idea for each of the goals we are trying to address.

Blue Sky Thinking

Ground Ideas

? ▽ 💡 ✓
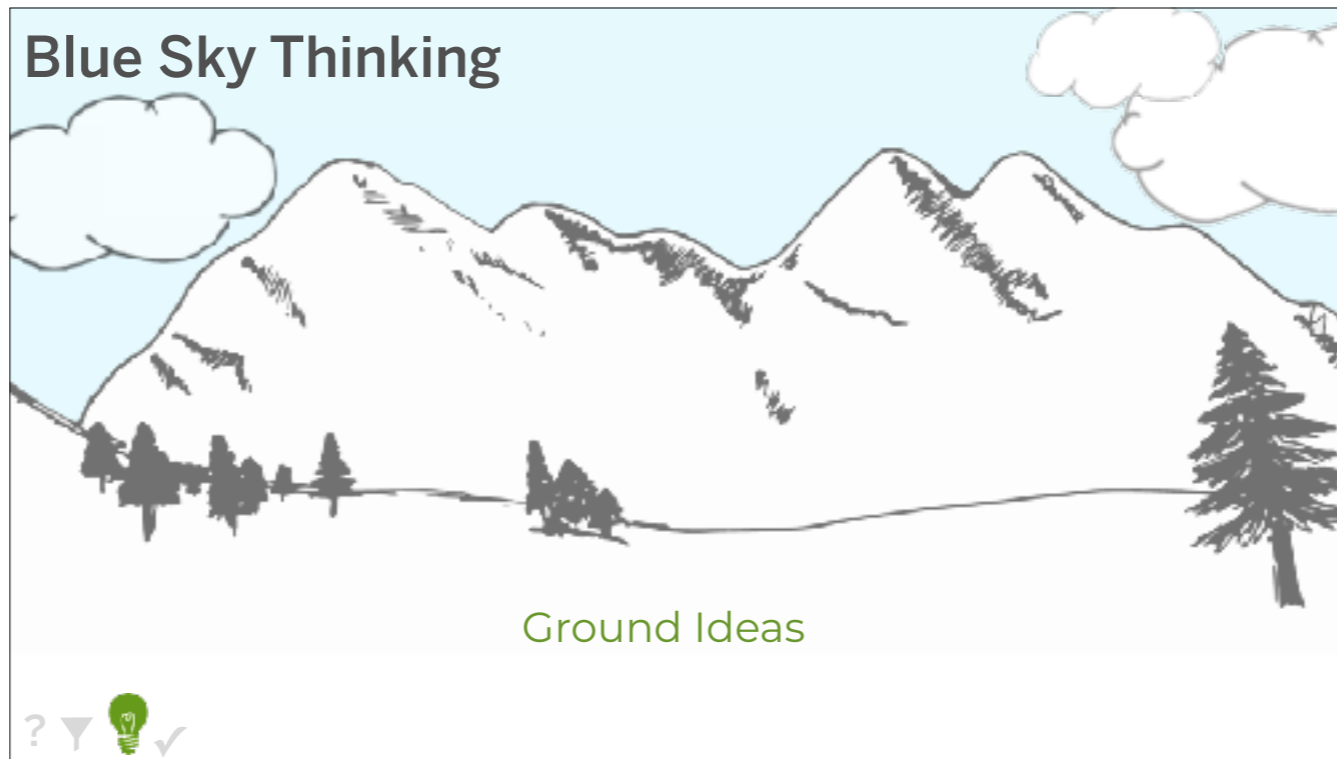
Ground ideas are usually the first idea we come up with. They're probably OK, but they're not very creative. Still, write them down.

Next, we are going to come up with a blue sky idea.

Blue Sky Thinking

Blue Sky Ideas

Ground Ideas

? ▼ 💡 ✓
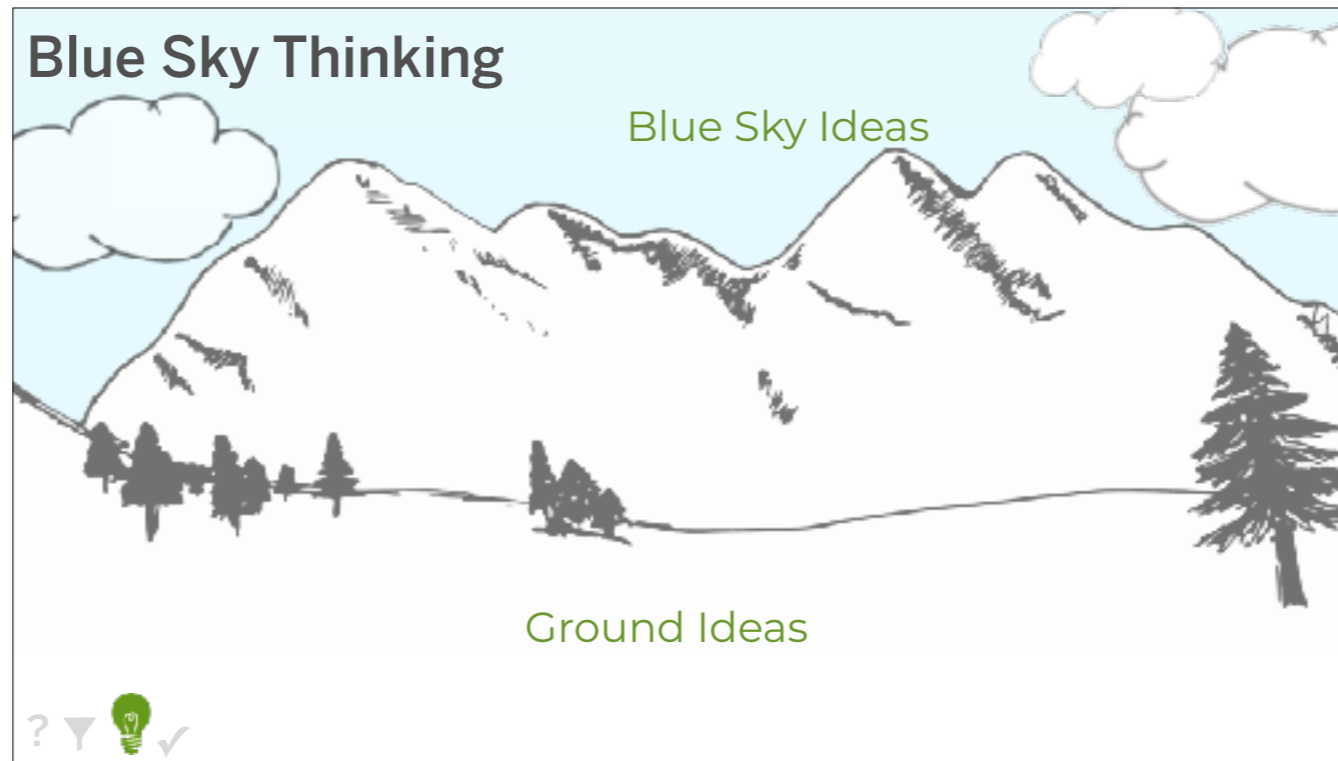
This is where we can use any technique we want to solve our problem. A good way to think about it is "if you could wave a magic wand...how would you solve the problem?"

Once we have both of these ideas

click

Blue Sky Thinking

Blue Sky Ideas

Creative Solutions
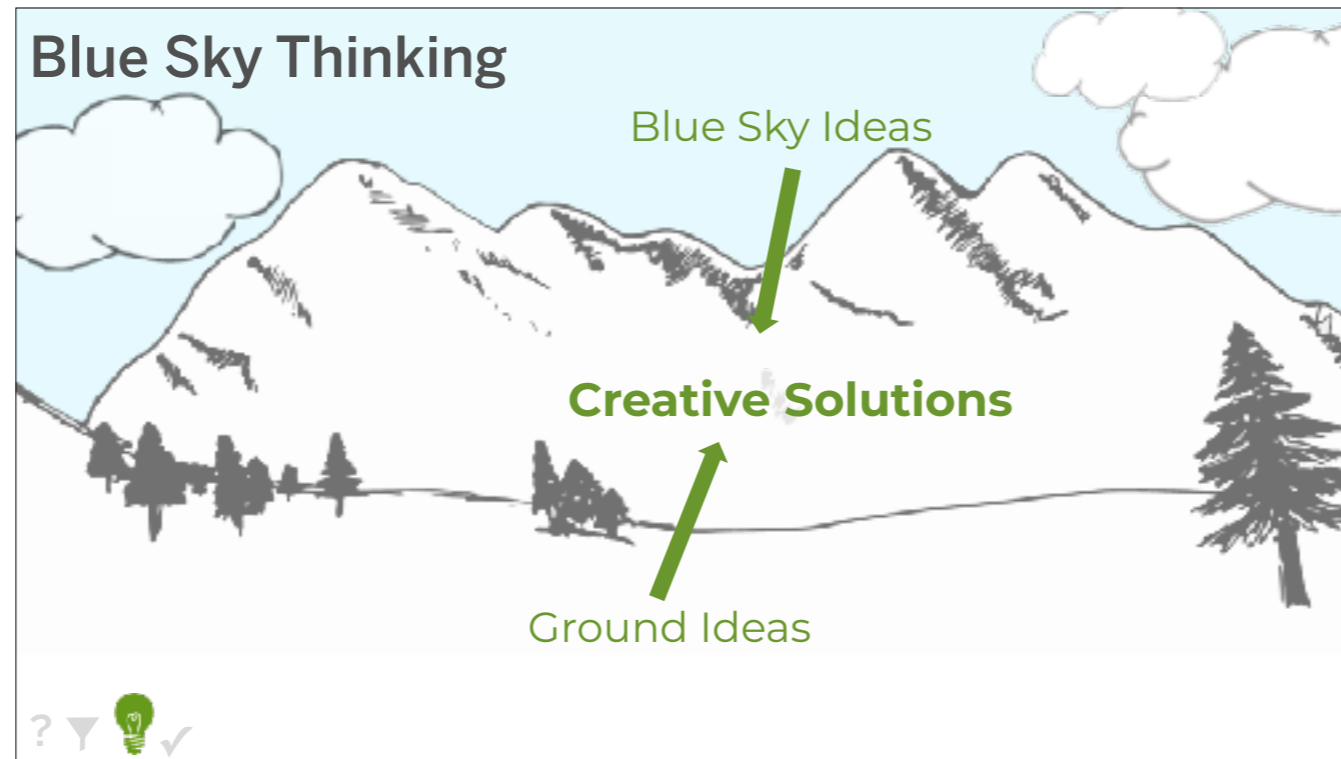
Ground Ideas

We try to combine our blue sky ideas with our more mundane ground ideas to come up with something truly creative.

The outcome of these brainstorming sessions might be individual vizzes, it might be drawings of ideas for a viz, or it might be creative ways to add interactivity so that you're showing the right information to your users at the right time.

Connect the dots

Next part of ideation is connecting the dots.
Pulling all of this work we've done into a coherent dashboard.

As we do this, continue pulling those goals back and thinking through your work in context of them.

If you have a few ideas for a viz that will accomplish a goal – list out the pros and cons of each idea, and go with the most appropriate one.

This is not a science. It's an art.

During this part - I find it's helpful to look at things I already know I like.

Here's an example.

Dashboard by Anthony Gould

This dashboard is about a boat race from Washington State to Alaska.

I liked how much information this is able to give our end user while using data to augment the story that's being told.

Dashboard by Anthony Gould

I also liked the circular map in the corner
great layout idea I wouldn't have thought of.
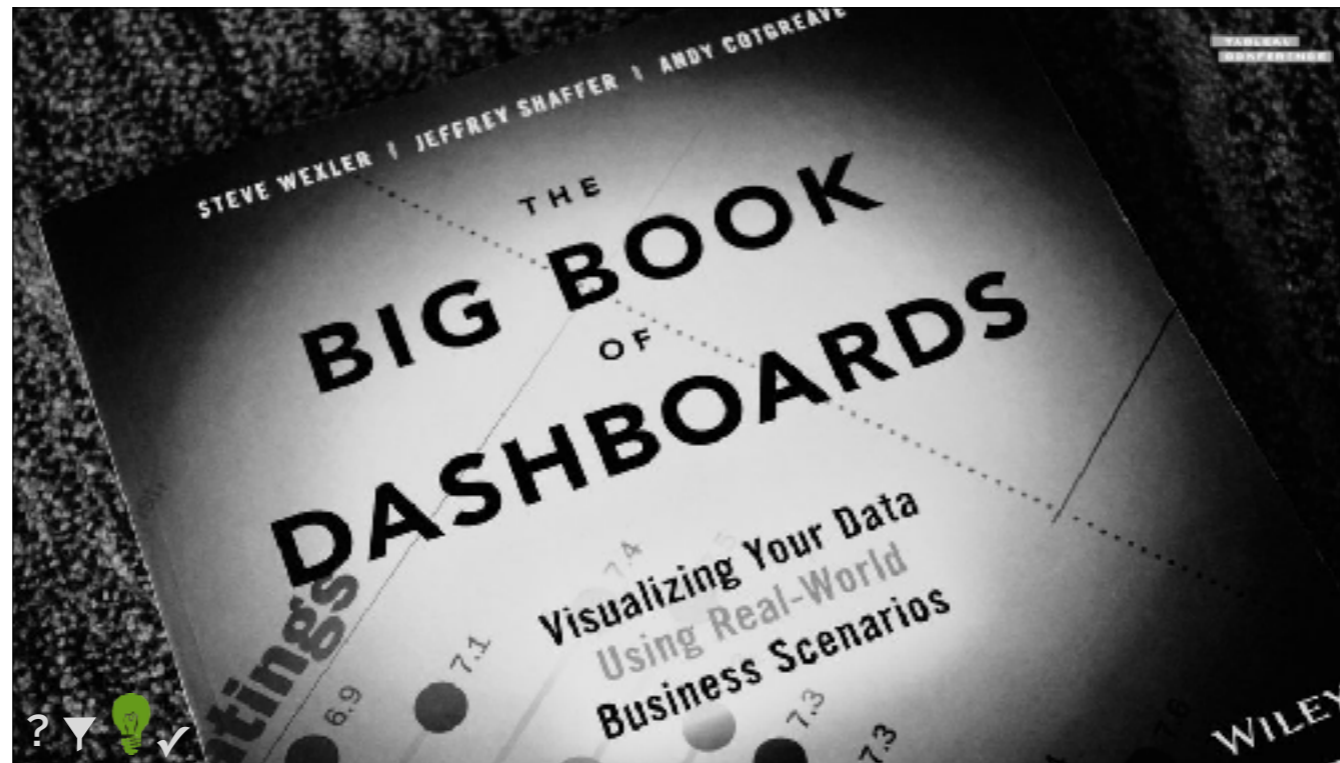
Want to give a shoutout to the big book of dashboards.

It's seriously like a recipe book for your dashboards. There are so many examples in there that at least one of them is bound to be similar to yours. It's a great book to keep on your desk for inspiration if you create dashboards regularly.

Last thing you're going to do before you move on to validation, is ....

Check the basics

? ▼ 💡 ✓

Once we have a full dashboard
 - check the basics

These are things that pretty much every dashboard should do.

Tons of great blog posts and books about these, so I will not go through everything,
but I'll give you some that I prioritize

Check the basics

Interaction

Don't make users scroll within vizzes

Keep interaction effects on-screen

Be mindful of users' familiarity with Tableau

? ▼ ✓

On interaction side...

Check the basics

Interaction

Don't make users scroll within vizzes

Keep interaction effects on-screen

Be mindful of users' familiarity with Tableau

Visual

Get it right in black and white

Use color mindfully and consistently

Whitespace helps focus

? ▼ 💡 ✓

On visual side...

These are bare necessities to keep your users satisfied.
Once you have checked all these – on your way to a pretty solid dashboard.

You know who your users are, what you want to do, and you have a one or more different dashboards or prototypes that you think solve your users' problems.

But before we send these out into the world, it's really helpful to validate that what we've come up with /actually works for our users/.

After all, we've done a LOT since we last talked to them.

The final part of the design process is the
Validation stage

Validate

Do not seek praise; seek criticism.

Paul Arden

During the Validate phase, we take the ideas we think we will move forward with and look at them more critically.

feedback from our users.

The amount of validation that's necessary here is going to depend on HOW
Important
your
dashboard
is.

It's up to you.

I'm going to show you a few ways to validate ideas

Try to break your ideas

First one – really easy.

Try to break your own ideas. This doesn't involve anyone else. Just you.
BUT! You need to be in the right mindset for this to be effective.

Be a Detective

? ▼ 💡 ✓

Be a detective.

To do this, you need to REALLY get into your users' head. Walk through the motions they'd go through. Try to accomplish their goals as if you'd never seen the dashboard before.

When doing this, I like to think of episode

Be a Detective

Brooklyn 99

If you haven't seen it, about detectives.

During this episode,

Once done,
GO FIX STUFF

Lightweight Feedback

? ▽ 💡 ✓

Next,

Lightweight feedback – this is quick feedback from colleagues or users.

You can do this with 10 minute conversations, or via email.

Gets more eyes on it than yours, which means they'll see things differently than you.

One trick...

Pretend a colleague built it

One trick I like to use for better feedback is to pretend a colleague built it.

When you're doing a lot of work for someone and you give them something that *almost* hits the mark, they have a tendency to be nice and tell you it's great
...even when it's not there yet.
If they think you're asking questions on behalf of a colleague, they'll be more honest with you about the flaws.

Remember that e-Learning dashboard I mentioned earlier?

Lightweight Feedback

Here's what we emailed to execs

This isn't even a real dashboard. It's a prototype made to play with the layout and charts we're showing without needing to worry about wrangling the actual dataviz details just yet.

You'll notice we didn't follow our own advice about color
meant a lot of our feedback was about color, which wasn't the best.

Also got some good feedback.

Lightweight Feedback

How do I answer the question:

How much have of our total training revenue has transferred to e-learning ?

Here is one question we got.
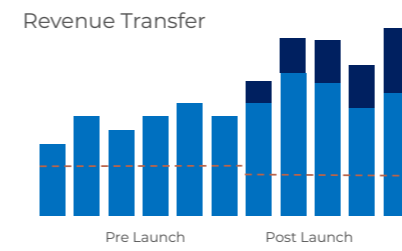
[pause]

Lightweight Feedback

How do I answer the question:

How much have of our total training revenue has transferred to e-learning ?

Revenue Transfer

Pre Launch   Post Launch

This viz that was supposed to answer that.

Could have taught them how.
Wasn't clear.
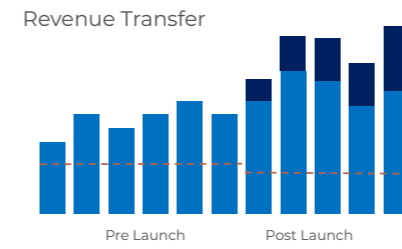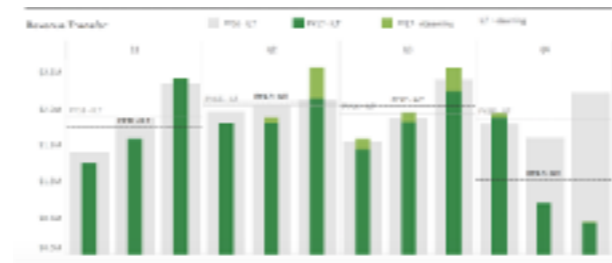
Instead
Back and forth
Made new viz.
yay.

Here's the draft and final side by side

Changes may seem small, but really helped our execs
get what they needed out of DB – faster.

Lightweight feedback is USUALLY ENOUGH FEEDBACK.

But. If you have really important dashboard
Lots of people

User Testing

you might want to do user testing.

which is the process of actually watching people use your dashboard in a test environment.

This is more time consuming, but it's really valuable, because you're actually watching someone use what you built.

A LOT of research has been done on user testing, and I won't get into it all but I will leave you with a few pointers

Give your users a task

PAUSE

Give them a task (or series of tasks) to do. It makes the conversation a lot more realistic than just walking them through the software, and it LETS YOU SEE what they'd actually do if you weren't sitting there.

Make sure you ask in this conversation if the "task" you ask them to do is something they would actually want to do with the dashboard

Make sure your users know you're not testing them – you're testing the software.

Ask your users to think aloud

Lastly, ask your users to think aloud.

It's a hard thing to do, because most of the time when people are completing something on a computer or mobile device, they don't talk to you about every decision they make. But you want to understand their thought process here.

And if they click on something and need to go back...prompt them. Ask what they expected to happen? If possible...you might be able to make it happen on your next iteration :D

With all this you might be wondering..

When are you finished?

Perfect is the enemy of done

[PAUSE]

As we all know – perfect is the enemy...of done

I usually know I'm done when people can complete mainline tasks without my help.

That was a lot of information – so lets recap.

The Design Process
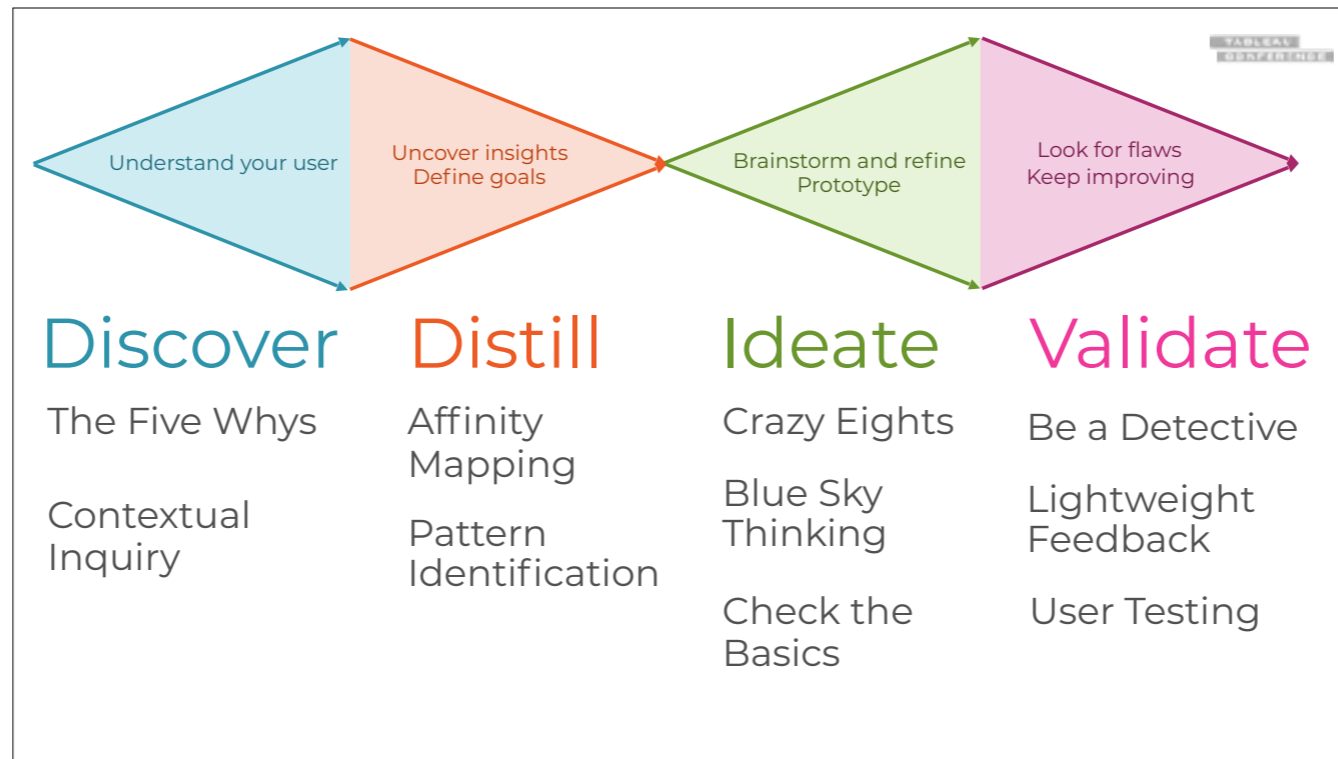
Discover   Distill   Ideate   Validate

We've talked about these four parts of the process. Going to introduce you to one more way to think about them.

Discover · Distill · Ideate · Validate

Understand your user — Uncover insights / Define goals — Brainstorm and refine / Prototype — Look for flaws / Keep improving
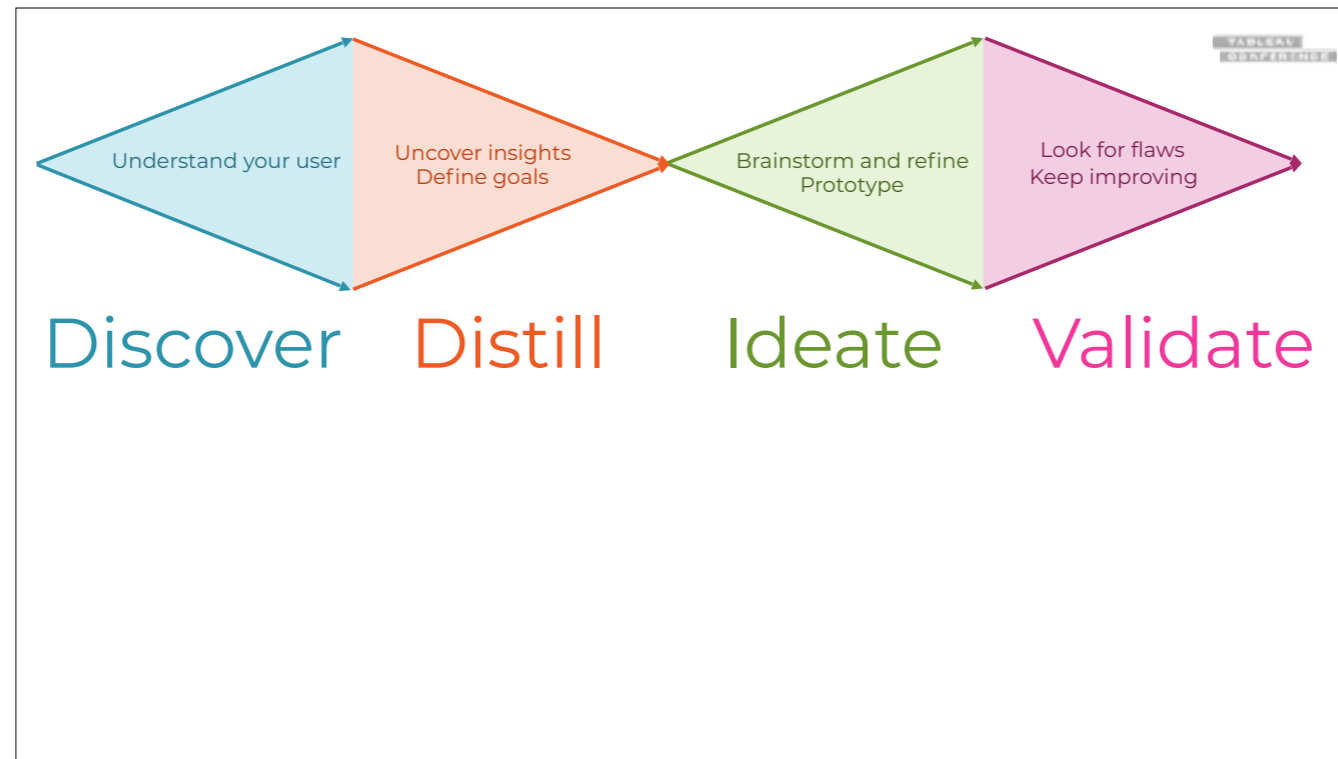
Double diamond.

shows different types of thinking

Discover

The Five Whys

Contextual Inquiry

Distill

Affinity Mapping

Pattern Identification

Ideate

Crazy Eights

Blue Sky Thinking

Check the Basics

Validate

Be a Detective

Lightweight Feedback

User Testing

Understand your user

Uncover insights
Define goals

Brainstorm and refine
Prototype

Look for flaws
Keep improving

Heres techniques I went through today.

I also have printouts of these all up here, or with the room managers at the door.

Iterate

Discover
The Five Whys

Contextual Inquiry

Distill
Affinity Mapping

Pattern Identification

Ideate
Crazy Eights

Blue Sky Thinking

Check the Basics

Validate
Be a Detective

Lightweight Feedback

User Testing

Understand your user

Uncover insights
Define goals

Brainstorm and refine
Prototype

Look for flaws
Keep improving
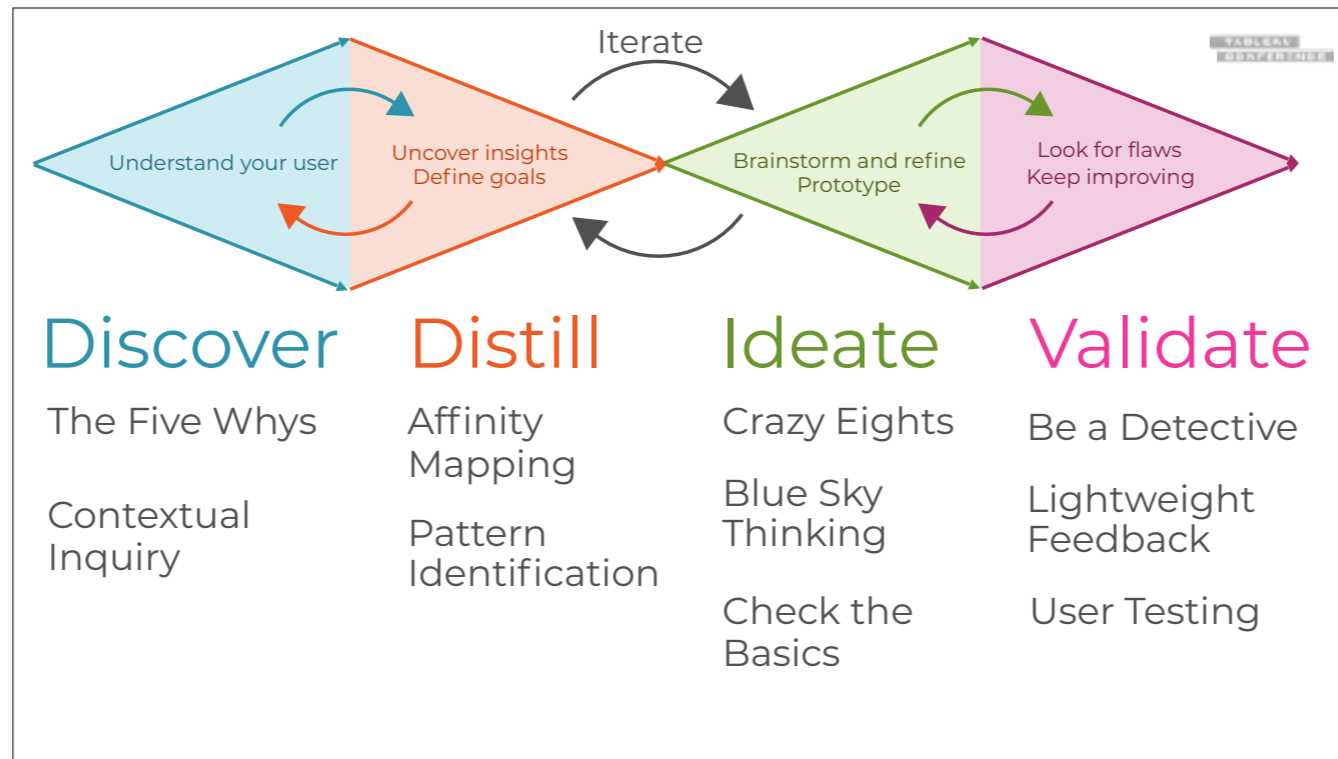
I want to re-iterate...that this process is ITERATIVE.

If you miss something THAT'S OK GO BACK.
Use what's useful. Throw out what doesn't.
This is all here to HELP YOU.
If it's not helping, DON'T USE IT.

Good design is
knowing your tradeoffs

Last thought.

Know your tradeoffs.

Every dashboard will be a balance between the data you have, your Tableau skills, the time you have, and what your users need.
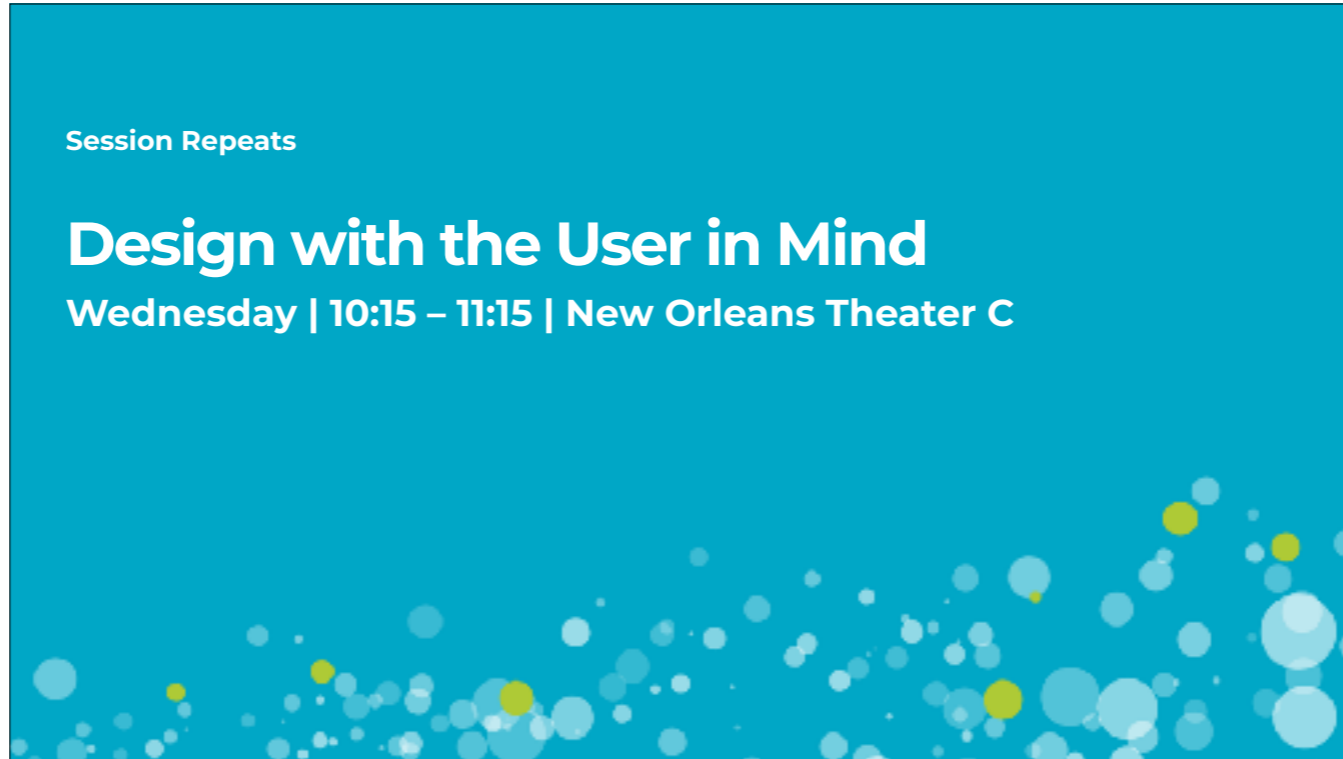
Good design isn't about making everything perfect.
It's about making the right things as good as they need to

Please complete the
session survey from the My
Evaluations menu
in your TC18 app

Alyshia Olsen
Design with the User in Mind

leave feedback plz

Session Repeats

Design with the User in Mind
Wednesday | 10:15 – 11:15 | New Orleans Theater C

Want more UX?

The Design of Everyday Things
Don Norman (Nielsen Norman Group)

 www.interaction-design.org

A Project Guide to UX Design
For User Experience Designers in the Field or in the Making

Handbook of Usability Testing
How to Plan, Design, and Conduct Effective Tests

Questions?