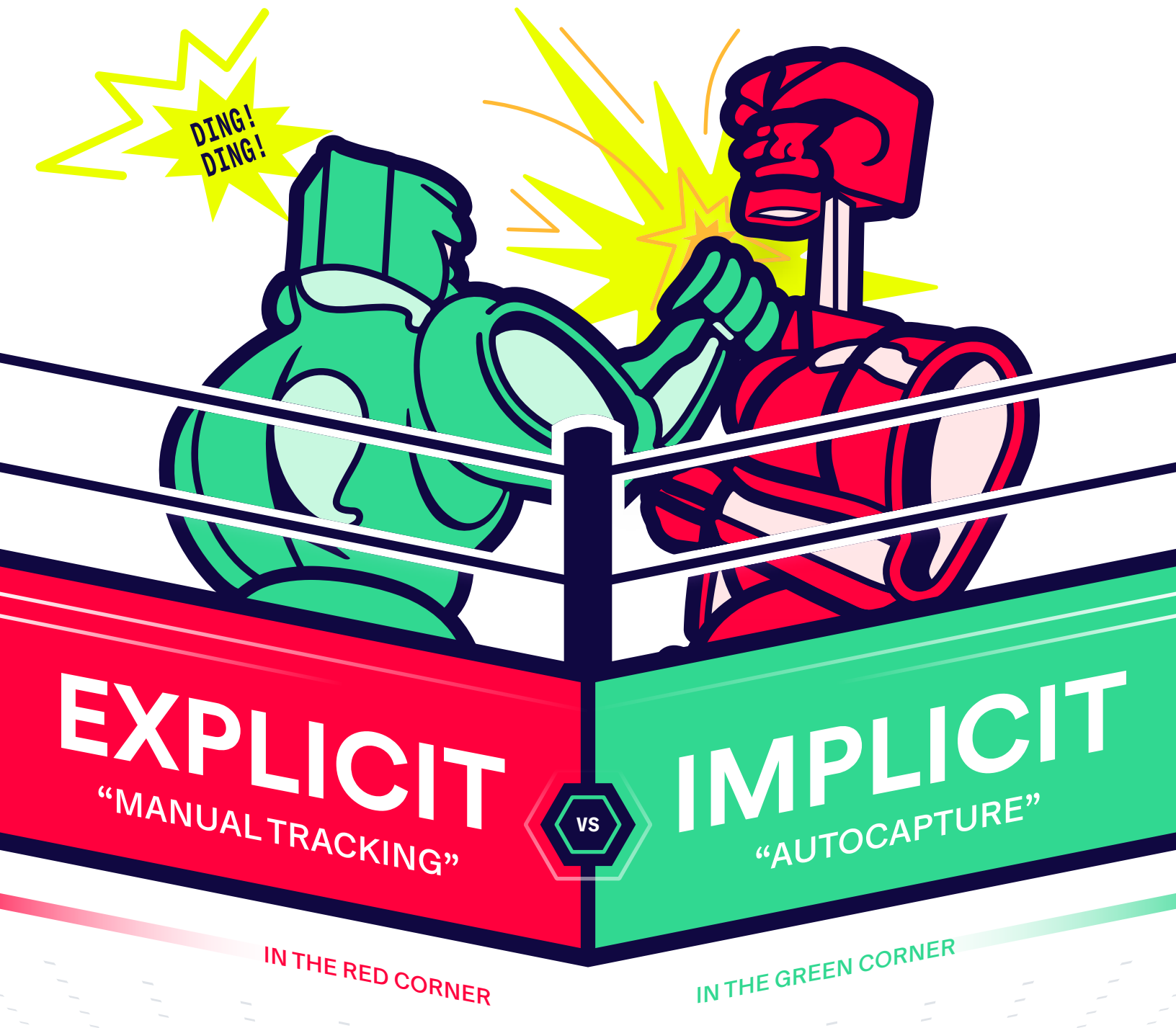




THE ULTIMATE FIGHT GUIDE

How Manual Tracking Measures Up to Automatic
Data Capture in Surfacing Actionable Insights

(And can you have both?)



EXPLICIT

“MANUAL TRACKING”

VS

IMPLICIT

“AUTOCAPTURE”

IN THE RED CORNER

IN THE GREEN CORNER

The Contenders



TONIGHT

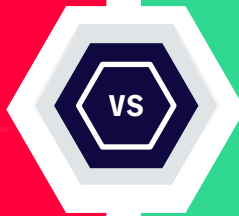


Two legends of tracking duke it out in the data collection ring!

LET'S MEET THEM

EXPLICIT

aka MANUALTAGGING



IMPLICIT

aka AUTOCAPTURE

In nine exciting rounds, we'll see how these two approaches measure up.

THE GOAL

to crown the ultimate tracking champion

Let's meet the contenders



Explicit Tracking, aka
MANUAL TAGGING
“The Brawler”

Slugging it out since 1997, explicit tracking is a warhorse with a solid history of supplying digital teams with usage data.

Here's how it works:

For every event teams want to track, an engineer goes into the codebase and inserts tracking code.

What this means:

Teams have to decide in advance what events to track.

Engineers have to insert tracking code into each event.

Teams wait for data to roll in.

New events require new tracking code.

Manual tracking requires a robust tracking plan, and strong process skills. But once in place, it can be a reliable solution.

Manual tracking can throw down, but needs a ton of hand-holding.



Implicit Tracking, aka
AUTOCAPTURE
“The Prizefighter”

Light on its feet, implicit tracking uses Autocapture — automatic data capture — to collect all customer data from your app or site.

Here's how it works:

Your team inserts a JavaScript snippet into your site header. After that, all event activity is tracked automatically — every click, swipe, form fill, pageview, and more.

What this means:

No need to decide in advance what to track.

No need for expensive engineering time.

All data is collected from the moment the snippet is added. Data remains searchable retroactively.

Data science can find correlations and patterns in the data you weren't even looking for.

With just a single line of code, implicit tracking enters the ring ready for action.

Autocapture keeps itself fresh by training with Data Science.



LADIES AND GENTLEMEN,
WELCOME...

TO THE

MAIN

EVENT!

Title Card



**User-Friendliness
and Functionality**

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Predictive Insights**

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Ethics with PII Data**

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Opportunities**

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Because implicit tracking collects everything automatically, it's great for answering quick, just-in-time questions, and for surfacing everything you never knew you needed to know.



ROUND

01

User-Friendliness and Functionality

Explicit Tracking

MANUAL TAGGING

Collecting data manually requires multiple steps and many stakeholders.

With manual tracking, you have to decide upfront which events you want to capture and analyze.

Then you need technical skills — your engineers need to stop what they're working on and set up the code for you, and then maintain it! Any tweaks you need to make to your app or site require code changes — essentially restarting the data collection cycle. And when have you ever met an engineer who has spare time?

Since tracking is centered around single events that matter to specific teams, data is fragmented throughout the org, and teams are left with an incomplete picture of customer behavior.

When teams conduct analysis in silos, insights rarely turn into action.

Implicit Tracking

AUTOCAPTURE

Implicit tracking makes analysis accessible to everyone in the company.

With a single code snippet, Autocapture provides immediate access to a **complete, retroactive dataset**. Heap's accessible UI empowers even non-technical teams to self-service, uncovering immediately actionable insights. No need to wait for help from engineering.

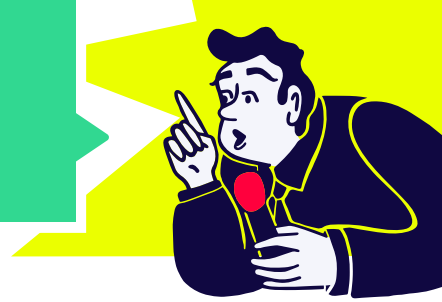
Heap's Data Engine lets teams easily control their data, distribute access, and ensure that everything stays reliable, with zero loss of flexibility.

From product to marketing to CS, different teams can access and utilize behavioral data without messing up the schema for everyone else.

Implicit starts off strong with a quick combination punch: it's easy to implement AND easy to use for both technical and non-technical teams.



A lot of people don't know that Heap lets you apply explicit tracking to any implicitly-captured data, so you can get as granular as you need to. Manual only has one punch, but Autocapture can throw all kinds of combinations.



ROUND
02

Asking Questions

Explicit Tracking

MANUAL TAGGING

Explicit tracking can only answer a specific set of questions — the ones you asked your engineering team to help answer way back when you submitted your tracking plan. Maybe even months ago.

When it's next quarter and you come up with a new question about an event you haven't been tracking? Too bad. You just got knocked out!

Your answers are limited to the questions that were coded in — only the ones that you expected to ask.

Implicit Tracking

AUTOCAPTURE

With implicit tracking, you can **ask endless questions, whenever you come up with them.** When you search for new correlations or insights, The data is already there.

Ask questions, then follow-up, then ask follow-ups to the follow-up questions. Each inquiry leads you down a new path of discovery. (If you ever run out of things to ask, we've got a [whole book of questions](#) you can use.)

With Autocapture you can ask anything, anytime, because you have everything.

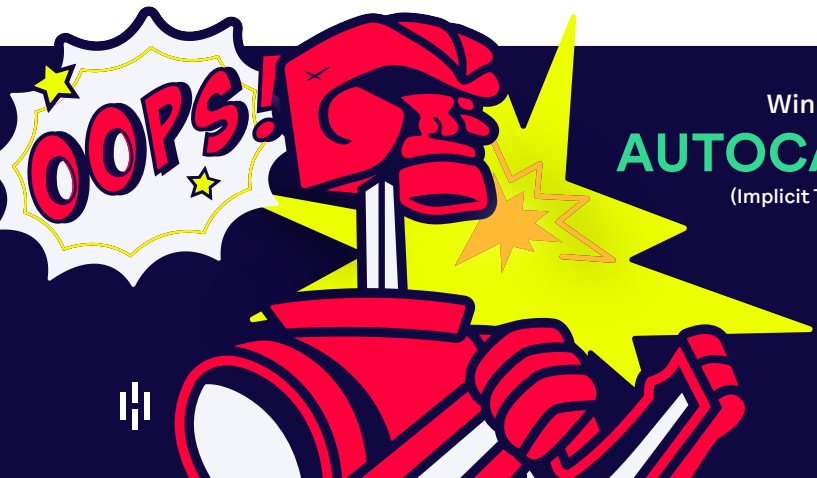
That's why inquisitive teams do best with manual tracking built on an autocaptured foundation.

REDFIN

"I find myself answering questions I didn't even know I had."



Nick Smith
Senior Product Manager



Winner:

AUTOCAPTURE

(Implicit Tracking)





Customer Story



Increased adoption from 3% to

99%

Reduced search errors by

40%

Improved engagement by

20%

For Northwestern Mutual, self-service was the motivating factor to bring on Heap.

Powered by the depth of customizability possible in Heap, the team set out to complete sophisticated analysis on feature engagement, retention cohorts, and retention curves. By visualizing detailed analytics journeys for their customers, they were finally able to see how their efforts drove outcomes.

In addition to the powerful results above, the biggest win is becoming data-driven, and being able to move forward with confidence in their products and decision making.



“Prior to Heap, we had to be very diligent about how we tracked stuff. It was very easy to forget to tag something, or to forget to call out what we wanted to track. Just the notion that you can set it and forget it has saved our bacon.”



Joe Pfeiffer
VP of Product

THEY JUST DON'T KNOW...WHAT THEY DON'T KNOW!

Manual tracking only performs the moves it's been told to, but Autocapture can do that too, and so much more. Look out!



ROUND

03

Discovery and Predictive Insights

Explicit Tracking

MANUAL TAGGING

With any tracking solution, you don't know what you don't know. With explicit tracking, however, you'll never find it. You can only analyze what you planned to track. Unexpected question? Too bad.

It's impossible to surface new insights without a complete dataset. With the gaps in your data that come from tracking single events, you miss the full picture of customer behavior — and the surprise connections that come with it.

Digging any deeper means yet another request for engineering to write more tracking code and then a long wait for the data to roll in. Kind of discourages any further discovery, doesn't it?

Manual tracking is data for reporting, not for exploration.

Explicit tracking starts off strong, but lacks endurance. One or two questions and it's all out of answers!

Implicit Tracking

AUTOCAPTURE

With Autocapture, finding valuable insights in your data is an immediately iterative process: a question exposes something curious, which inspires you to ask another question, and another, and another....

A good tracking solution should let you surface the kind of insights that can profoundly change your product or business. A great tracking solution will work like an infinite set of extra eyes, searching everywhere for things that deserve closer attention.

Heap's new Illuminate features add a powerful data science layer that scours your dataset to automatically uncover the insights that lead to the most impactful business results — even on untracked events! That means **you don't even have to be looking** in order to surface valuable insights that can significantly improve your product, user experience, and conversion rates.

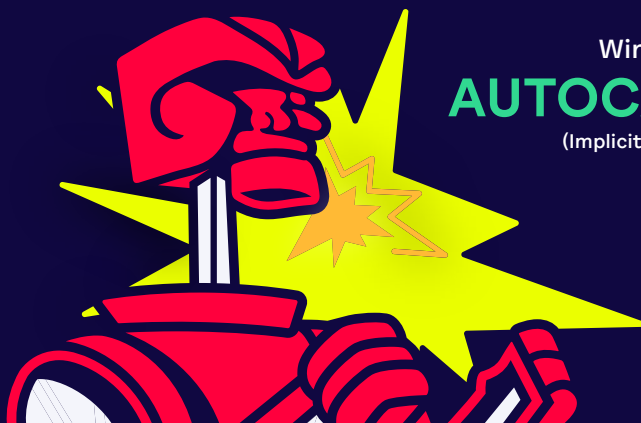
With codeless tracking, insights are abundant. You're limited only by your curiosity.

Autocapture has the power to see the next punch coming. Manual Tagging only knows it's been hit after the fact.

Winner:

AUTOCAPTURE

(Implicit Tracking)



Implicit tracking can focus on any event in history, just like explicit tracking can. But the future is where all the new discoveries are!



ROUND
04

Avoiding Bias

Explicit Tracking

MANUAL TAGGING

By choosing which events you want to capture, you're already assuming what you think is important. **This data will only confirm what you want to say.**

Manual tracking limits understanding of customer behavior to what's already happened. This makes it impossible to anticipate micro-trends in customer behavior or predict market shifts that extend beyond your narrow perspective.

Trying to capture dynamic market data with a static tracking agenda? It just doesn't work.

You can't plan ahead to track insights that you haven't yet uncovered.

Implicit Tracking

AUTOCAPTURE

Implicit tracking eliminates bias by tracking *everything* — even the events that you might initially think are unimportant. You must let the data speak for itself.

That way, you're able to keep yourself open to learning new things, and seeing them before other people can. **A full dataset provides complete and predictive insight.**

This gives teams the opportunity to be proactive, rather than reactive when prioritizing product updates or outreach to customer accounts.

Autocapture gives you advance signals on what's coming, so you can deal with future events before they happen.

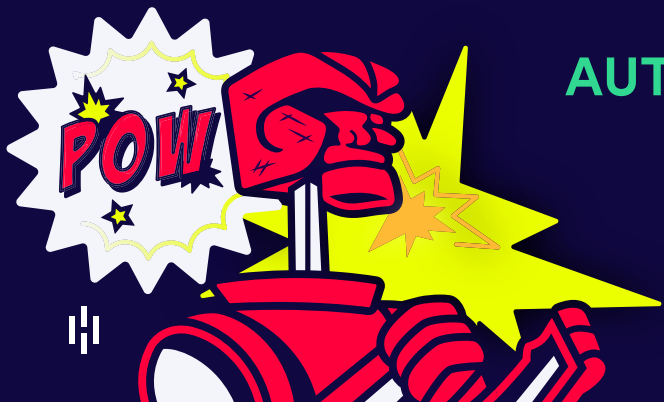
Explicit tracking doesn't stand a chance. Deciding in advance what to track is biased by definition.

esurance

"That Autocapture, man. That's so great. That's the thing that makes me so happy."



Sierra Hines
Customer Insights Analyst



Winner:

AUTOCAPTURE

(Implicit Tracking)





Customer Story



CTR improved by

70%

Time saved

1.5 hours per week, per analyst

For the EdTech company Teachers Pay Teachers, switching to Heap meant finally ditching the burden of bad data from Google Analytics.

In the days of Google Analytics, the TpT team felt like they had to go on a scavenger hunt every time they wanted to answer basic questions.

But that all changed when they got access to Heap. Since implementation, they've estimated that analysts have each saved 1.5 hours every week thanks to Heap.



Teachers Pay Teachers

“Heap’s Autocapture is especially valuable after a launch when we are scrambling to figure out why something isn’t working. We can launch and be confident that if something goes wrong, everything will be there for us to dive into.”



Julian Gilliatt
Head of Analytics

Security, Privacy, and Ethics with PII Data

Explicit Tracking

MANUAL TAGGING

Since you need to decide what you're tracking beforehand, you know exactly what you're collecting and where it's going.

Predetermining which data you want to capture (and how) in your tracking plan can help you maintain GDPR and SOC 2 compliance.

However, when capturing sensitive data, manually instrumenting analytics does introduce the risk of human error. A developer writing code could accidentally track something they're not supposed to and put your compliance at risk.

Manual tracking's limitations are a mixed blessing. Your dataset is VERY limited. But because of that it's easy to keep everything protected.

Implicit Tracking

AUTOCAPTURE

With Heap's Autocapture, you also know exactly what you're collecting and what you're doing with that data.

By default, Heap automatically captures actions, not the content of those actions. So the sensitive data entered in from fields is not implicitly tracked. You have to track that explicitly. You can manually select subsets of data, and get as granular as you like with that information.

With Heap's governance features, you can ignore interactions with sensitive elements or form fields, and programmatically filter personal information while data is being captured. You can also control data access for security by setting an environment where only certain people can view sensitive data.

Heap also offers an API for user deletion to further automate compliance with CCPA and GDPR.

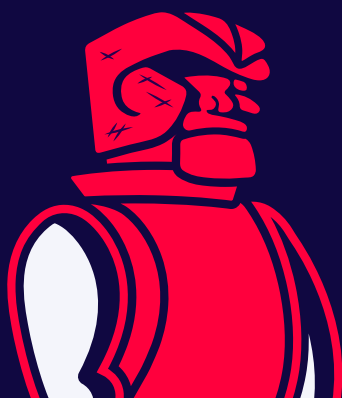
Human error is one of the biggest risks in data security, so automating data capture helps to reduce that risk.



MANUAL TRACKING IS SAVED BY THE BELL!

Folks, we'll admit, sometimes manual tracking is necessary. With Heap, you can still use manual tracking whenever you need to, such as with personal and private information.

Good thing Heap lets you manually capture any data you're concerned about!



No winner:
IT'S A PUSH!



WE GOT A REAL PRESSURE COOKER HERE...WHO WILL COME OUT AHEAD?

When it comes to organization, each method can strongly hold its own. The critical difference, as always, is that Heap can do both.



ROUND

06

Data Governance and Organization

Explicit Tracking

MANUAL TAGGING

Data capture is governed from the get-go with a tracking plan that defines the specific data you want to collect, and how you're going to collect it.

It requires time, effort, and money upfront, but the result is clean, quality data (albeit limited to what you included in your initial plan).

There's a method to what may seem like a maddeningly slow data collection process.

Manual tracking offers you a high degree of control to ensure consistent and organized data. As long as you're committed to keeping it that way.

Once your dataset gets larger, however, the manual approach tends to break down.

Implicit Tracking

AUTOCAPTURE

At one point, teams were worried that Autocapture would leave them with piles of messy data. That's just not true anymore.

[Heap's Data Engine](#) gives you the tools to maintain the quality of your data, ensuring that your data stays clean, organized, and shared across the org.

Heap's Data Dictionary helps clean, organize, and annotate your dataset, while Heap's Event Verification Flow verifies definitions before they're used. Naming conventions ensure that events use language that your entire organization will understand.

At scale, you need built in tools to govern your data. Only Heap gives them to you.

The Contenders go toe to toe. If you keep your dataset tiny, a manual approach to governance works fine. Once you start scaling your data, you really need built-in tools and processes to keep everything clean and organized.



FOLKS, THIS ROUND IS OVER BEFORE IT BEGINS!

Manual tracking is just too old-fashioned and slow. It's no match for Autocapture's fancy footwork and speedy data science!



ROUND
07

Effectiveness in Action

Explicit Tracking

MANUAL TAGGING

With manual tracking, it can take weeks (or even months!) of waiting to collect new data and understand trends. Even when that new data finally rolls in, you can't be sure how reliable or complete it is.

With this approach, it's nearly impossible to understand how users really navigate your site. Let alone to predict trends — or even respond to them! **Did you know 62% of funnels contain an alternative path to conversion that wasn't tracked?** Might as well give up now and save time.

In addition, manual data collection tends to be localized to individual teams or PMs, meaning different teams are looking at different data.

So you're unable to get the right information quickly enough to know the right response. Or if you're lucky enough to get the info you need, it's unlikely you'll be able to distribute the information to the right people in time to make a decision that's aligned with the rest of the org.

Implicit Tracking

AUTOCAPTURE

This one is simple: **More data means you can identify and analyze trends, rather than simply track isolated events.**

The [Graph](#) module in Heap allows you to construct powerful visualizations of your data over time.

In addition, it's easy to make data actionable. Heap's [Report Alerts](#) let you set alerts on any event and have Heap send a message via email or Slack when a report's value changes by a specified amount.

Heap's [Salesforce Connector](#) brings Heap data directly into Salesforce, so sales and CS teams can use quantitative data to measure account health. This lets them identify at-risk customers and easily prioritize engagement efforts.

And [Heap Illuminate](#) gives you information about key events you haven't even tracked! Let's see manual tracking deliver that.

Face it. With its speed and agility, implicit tracking runs circles around manual tracking.



Winner:

AUTOCAPTURE

(Implicit Tracking)



LOOK OUT! - MANNY'S GOT A GLASS JAW!

While implicit tracking can copy all of explicit tracking's moves, it just doesn't work the other way.



ROUND

08

Adapting to Change

Explicit Tracking

MANUAL TAGGING

Manual tracking is brittle. If you decide to redo your site, you have to retool everything.

Remember, as new pages, features, and elements get added to the site, you need to constantly add new tracking code. If you forget to do this, all of the customer interactions with those things are lost in a data blackout — a period in time when no data gets collected.

Even if you do remember to track new events, launching changes to your site or app becomes a tedious exercise that is at best an additional step in each sprint, and at worst, a hindrance to moving fast.

Manual tagging can't deal with rapid change and requires engineers to re-instrument tracking for every site update.

Implicit Tracking

AUTOCAPTURE

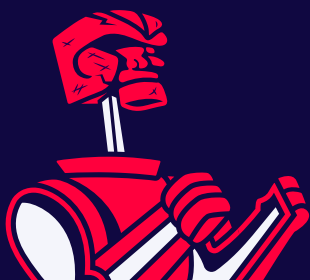
Autocapture doesn't mind how often you iterate — it's always collecting events in the background. No gaps in tracking means no holes in your data, no matter how many updates you ship.

Heap's scalable governance tools use smart workflows to alert you to fix outdated definitions and archive ones that aren't being used. Old data can also be merged with new definitions to maintain retroactive metrics.

Manual tracking is no good at slipping the hard hits. Implicit tracking rolls with the punches and can handle anything you throw at it.

Knockdown by:

AUTOCAPTURE



MANUAL'S A PALOOKA! AUTOCAPTURE JUST ATE THEM UP!!

The truth is, Autocapture was the heavy favorite... and with all of Heap's latest data science capabilities, it's an overwhelming blowout!



ROUND
09

Seeing Invisible Opportunities

Explicit Tracking

MANUAL TAGGING

When it comes to predictive insights, manual tracking really shows its primitive nature.

It simply can't do this at all!

Manual tracking can only do what you tell it to do. It will never lead you to unexpected insights. And if the data you fed it was inaccurate, your conclusions not only won't be right, **they might not even be wrong.**

Implicit Tracking

AUTOCAPTURE

Heap is the only analytics solution that shows you every action by every user on your product or site, and then steers you towards the improvements that will have the greatest impact on your business.

Heap's new data science features include:

Journey Maps: the first tool ever that can compare paths leading to the same goal, or evaluate the impact of optional steps in a funnel. You can surface all of the different journeys users take through your digital experience to quickly and accurately test whether a specific user behavior affects conversion.

Effort Analysis provides the first-ever quantitative measurement of user friction, capturing quantitatively the difficulty users face when moving through every step of every user flow in your digital experience.

Step Suggestions automatically surface events that exhibit significant dropoff but which aren't currently tracked in your funnel. This even includes events you haven't yet defined!



MANUAL TRACKING IS SAVED BY THE BELL!

Folks, something unprecedented is happening! Autocapture is... swallowing manual tracking! It seems that with Autocapture, you really don't have to choose!

Knockout:
AUTOCAPTURE WINS!
(Implicit Tracking)



THE FINAL ANALYSIS:
In tonight's fight,
the real winner is...you!



DATA TRACKING CHAMPION: AUTOCAPTURE + MANUAL TRACKING

Why have to choose?

If you had to choose just one tracking method to have in your corner, Autocapture would be the obvious choice. But best of all, when you choose Heap, you get **both implicit tracking and explicit tracking abilities for a truly complete dataset.**

You can start your analysis by capturing everything through Autocapture, then perform explicit tracking as needed to add granular context to events pertinent to your core business needs. For nuanced use cases and analysis goals, you can supplement additional metadata using snapshots, APIs, and custom properties, all within our UI — no codebase changes needed. It's simply the best way to get full value out of your analytics investment.

If you're curious to learn more about Heap's approach to explicit and implicit tracking, visit us at heap.io.

Keep fighting the good fight!

— The Heap team

