Tegra118

UX Research

Best Practice Guide

Introduction

Insight = Competitive advantage

The world's most valuable companies have a huge focus on understanding their users at with huge dedicated capability to understanding user behaviour both in terms of qualitative and quantitative methods.

A strong research practice along with a strong experimenting culture gives organisations a competitive advantage over many of their competitors. Quality insight is not easy to unearth and from a psychological perspective we find it hard to synthesise data with all the biases at play.

But good research can drive innovation by giving product leaders the insight to make better decisions.

Introduction

Half-Life of Knowledge

Donald O. Hebb a Canadian psychologist coined the term half-life of knowledge and predicted that in psychology the half-life of knowledge is just 5 years* and in IT even shorter before your COBOL skills are rendered useless.

In the field of psychology where quantitative research lives we know that with so many unknowns and conditions affecting ones behaviour it is even harder to reliably predict future behaviour. So it is important the quality of research is high and the iterative process is in place so we may continue to learn.

We call this process Continuous Discovery and Design should spend as much time as possible in this mode. Many of the activities carried out in Discovery can become artefacts for delivery so the need to spend a long time in Delivery mode should be mitigated.

Source: VSauce NB: Current estimates of psychology half-life range between specialities 2-13 years mean 7 years.
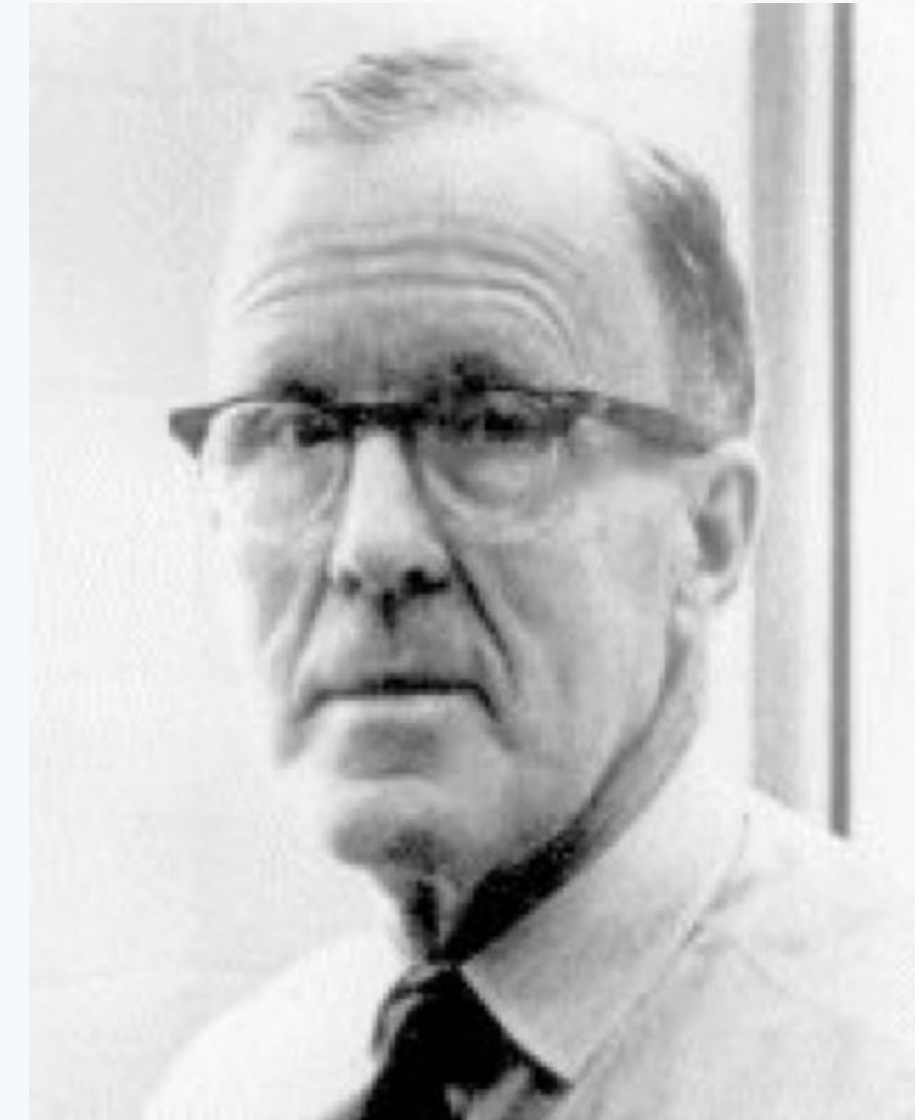
Now we know better

Half-Life of Knowledge

Here are a few of the old practices we steer well clear of in modern UX design.

GETTING A USERS FEEDBACK IN A FOCUS GROUP

Focus groups suffer from group dynamics that bias individuals responses. If you're interested in the group dynamic then they are still useful but for the vast majority of cases we no longer employ this method.

PITCHING THE SOLUTION

Future lead questions suffer from a group of biases that over estimate our likihood to exhibit a behaviour in the future. We under-estimate the effort (planning fallacy), over estimate our likihood of success (optimism bias) or use existing preferences onto future events (projection bias). Instead we should ask about historical behaviours (ideally recent) to examine actual behaviour.

NET PROMOTER SCORES (NPS)

A talk in and of itself NPS is a symptom of people looking for a silver bullet for customer satisfaction. Aside from its peculiar math the number really tells you nothing about the why a customer holds a certain sentiment.

Sources:

https://measuringu.com/nps-harmful/

https://articles.uie.com/net-promoter-score-considered-harmful-and-what-ux-professionals-can-do-about-it/

https://uxdesign.cc/net-promoter-score-nps-is-not-harmful-believing-in-silver-bullets-is-9c537f450a24

https://medium.com/swlh/nps-is-a-waste-of-time-use-these-metrics-instead-3df33ba0ee24

https://www.forbes.com/sites/ronshevlin/2019/05/21/its-time-to-retire-the-net-promoter-score/#6d8cf67e6bbb

https://www.youtube.com/watch?v=OTkP2JDeGWM&list=PLfZAwUUQ-TLsvGXJV6KZtzx5DZx3aLtjE&index=24&t=6s&ab_channel=Techstars

https://www.bizjournals.com/boston/inno/stories/news/2011/07/18/don-t-pitch-a-solution-pitch-a-problem-learning.html

https://www.userzoom.com/blog/what-are-leading-questions-in-ux-tests-and-how-can-you-avoid-them/

https://blog.prototypr.io/why-focus-groups-dont-work-98c7477d5ce2

https://medium.com/mule-design/focus-groups-are-worthless-7d30891e58f1
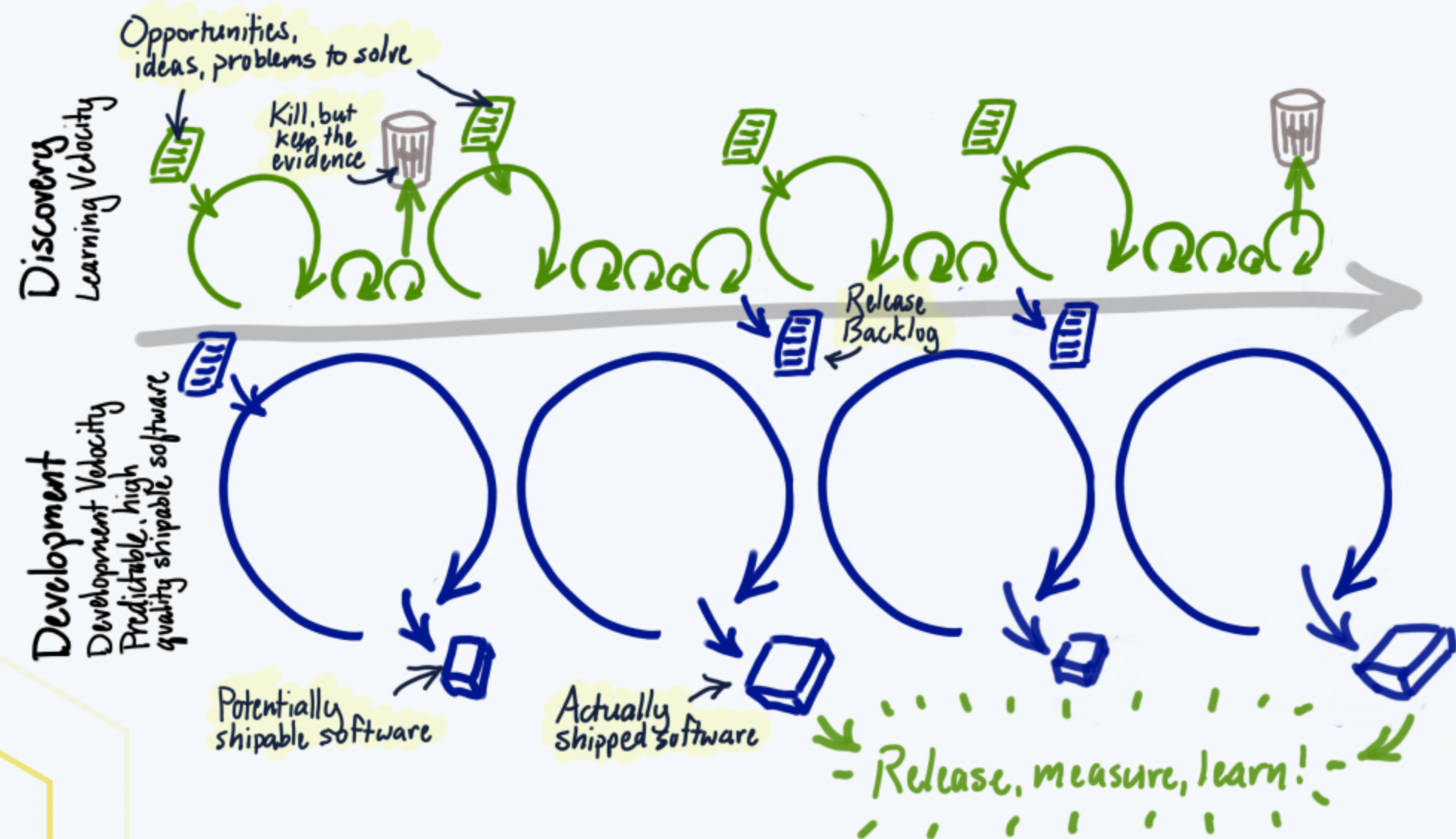
Discovery to Delivery

Dual-Track Agile

Dual-Track Agile is a method of managing the two distinct areas of product development in order to maximise their efficacy. In an ideal world all stories would pass through discovery and if validated move onto the delivery track.

Khaos - God of ... chaos

Apollo - God of Reason and Logic

(in)validate

Re-framing 'requirements' as 'hypothesis'

People have a tendency to build what they think is right, relying on their previous experience and 'logical' interpretation of the problem. But what we've learned is that past outcomes are not a good indicator of future performance and people's own self-serving bias' inflate our perceived ability to be right then blame external factors when we are wrong.

Steps to (in)validated learning

Apply the Scientific Method

If we borrow the scientific method we are able to reduce these biases and give ourselves more reliable insight as our 'solutions' can be (in)validated.

Test a falsifiable hypothesis

Create a repeatable experiments that try disprove your theory rather than validate it. This humble mindset leads to more rigorous tests and reduces our biases.

Set a pivot BEFORE you execute the experiments.

It's really important to set a pivot before you undertake the tests, it forces you to accept results outside of your predicted range need further investigation rather than post rationalisation.

example: smaller affect (but still statistically significant) > we didn't think its ROI was worthwhile then so shouldn't deliver this

Example: negative affect > there is a gap in your knowledge either in the test or the solution you have no evidence to deliver this

Example: bigger positive affect > results are great but you don't understand why, more investigation is needed to utilise the chan

Definitions of Ready and Done

A practice for flowing stories through the pipeline

Both tracks have their own definition of ready and definition of done. They meet in the middle. Here
is an example of what a negotiated set of definitions look like.

DISCOVERY		DELIVERY	
Definition of ready:	**Definition of done:**	**Definition of ready:**	**Definition of done:**
Assumptions declared	Experiment outcomes	Designs	Test pass
Hypothesis established	Designs	User stories	PO signed off
Includes pivot	UX artefacts	Acceptance Criteria	Deployed to CI
User story	Detailed user stories	Tests	
Passes 'I.N.V.E.S.T.'	Measure identified		
Test method defined			

Source: https://trello.com/c/UYY5HokQ/10-template-do-not-remove

Research Foundations

Everything you need to run your first usability interview

Start with usability a session

Usability sessions and customer interviews in general are a great starting point for any team. You don't need to interview 25 customers a week to get started but there are a few tools you'll need to make the most of your sessions.

Tools

Essentially everything, according to the scientific method, in the natural world is not design. It is understood to be the outcome of the initial conditions creating infinite random outcomes.

Examples:

The hard thing about user interviews and usability studies:

Getting the initial paperwork in place

There's usually an initial struggle to get things like consent forms in place and ready to use, just a symptom of the extra legal cross checks needed to approve the paperwork.

Recruiting users

Finding users, recruiting them and actually getting them in to a session takes lots of outreach and organisation. Working with account managers makes a huge difference.

Not biasing the user in interview

Even the simple things like avoiding leading questions doesn't come naturally so there's some interview techniques that you learn and practice to get the most of out sessions.

Synthesising and sharing the findings

The first interview is straight forward enough, but as you multiple your interviews the cost of synethesising and managing all the feedback becomes a significant exercise. Just transcribing conversations takes as long (if not longer) than the session itself.

- Basically all of it

UX strategy

From ignorance to insight
Why we should be making informed decisions

Humans naturally have a collection of biases that lead us to making sub-optimal decisions led by our primal brain functions. Biases are really mental shortcuts our brains take to make decision making easier. But while they are good most of time they can lead us astray. Our rational functions take considerably more effort and so we often turn to shortcuts.

Fundamentally we do the same developing products. We have an inclination to just go with our gut or use 'logic' to negotiate what appears to be the most reasonable solution. We do this because developing true insight is really hard.

Adding a process to rigorously challenge your ideas turns your intuition into evidence. Evidence gives you a platform to support your ideas and reduces the risk of delivery. The outcomes of research should feed actionable insights in your prioritisation models.

Most people in an organisation have some familiarity with their customers but this can often misguide you particularly when you broach new ground as you feel like you understand the needs but have actually moved back to intuition mode where biases are most influential.

Assumptions v. Knowledge

Future Today Institute

1. Pure Gut
- **No evidence affirming or negating**
- **Hopeful thinking**
- **Intuition**

2. Familiarity
- **Some evidence**
- **Some insights**
- **Lots of remaining questions**
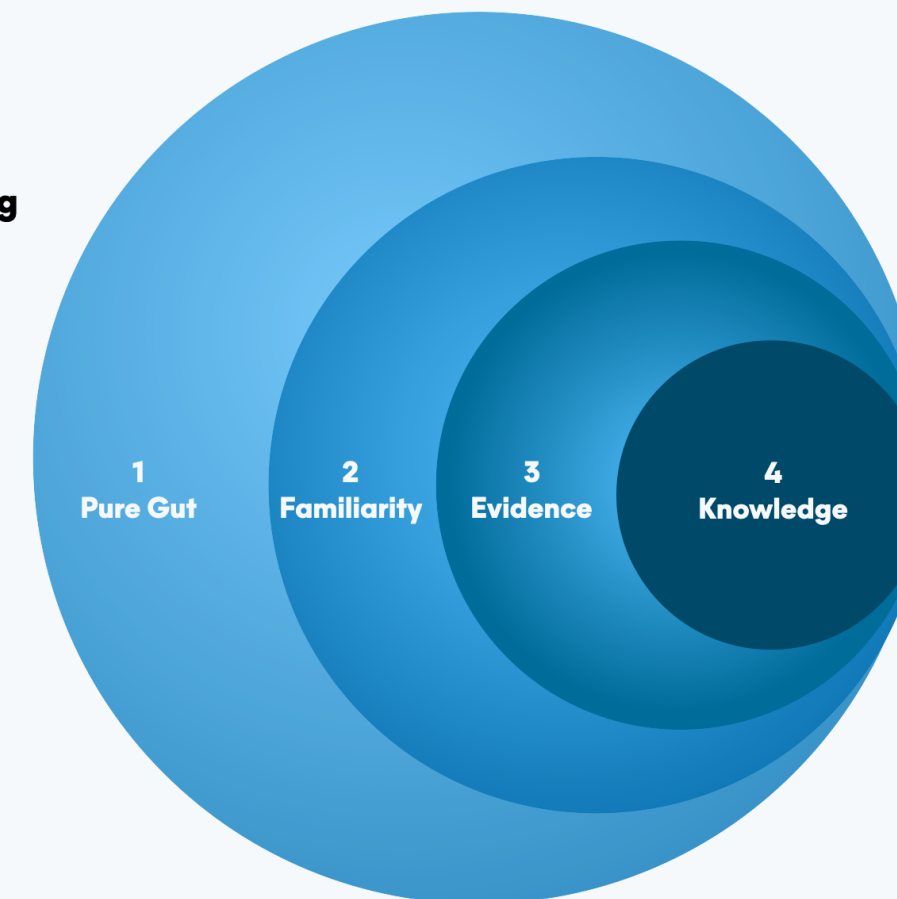
3. Evidence
- **Mounting evidence**
- **Models are built**
- **A few remaining questions**

4. Knowledge
- **Extensive evidence**
- **Established models**
- **Questions answered**

| 1 Pure Gut | 2 Familiarity | 3 Evidence | 4 Knowledge |

From ignorance to insight
What to test

We have a affinity map to model what we should be testing and what probably doesn't need to be tested. I would caveat that sometimes even the most obvious things sometimes need testing - case example slack's magic links.

Features

More value

6   9

7   12

prioritise
(in)validate

8   2

10

Gunna do it

Less risk   More risk

1

4

Throw away

Save for later

5

11

Less value

Research as strategic tool
Maturing to level 6 UX Research

Most organisations who use research use it tactically, the value isn't extended beyond that. It's where we'll start with a view to extracting more value long term.

The graph illustrates how as we move from tactical impact to visionary impact our clarity becomes more abstract. Research follows this trend and research undertaken in product teams is usually tactical to align with the goals of the team and their cadence.

But wider insight gathering should also take place that may run over a much longer duration than a single sprint. Ideally anything tactical can contribute to the bigger picture. Good software helps us achieve this as notes, and spreadsheets littered around the organisation are all but impossible to organise otherwise.

https://futuretodayinstitute.com/

Less

Data, evidence, and certainty

More

Tactics   Strategy   Vision

Evolution

1-2 years

2-5 years

5-10 years

10+ years
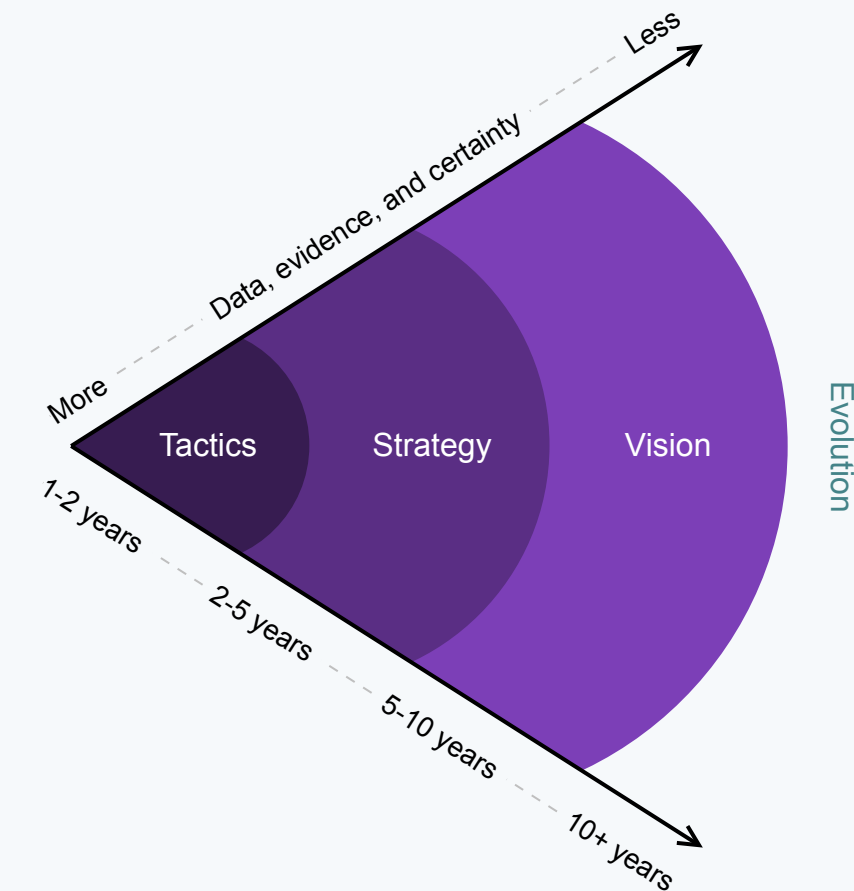
Tools

Research Tools

In order to effectively collect insight we'll need to follow some process
use some tools. The tools vary by the type of research as do the proce
They are broadly split into usability studies and quantitative behavioura
studies.

We can call these the What (quant) and the Why (qual). You need a
combination of the two to extract actionable insight.

Tools

Qualatative

Qualitative tools are mostly about logistics, organising sessions, documenting them and storing them in accordance with GPDR and CCPA.

We'll need to carry out the following activities and tools to speed those processes up and/or do them better:

User Attraction

Scheduling

Permissions

Session capture

Transcribing/Encoding

Synthesising

Storage

Reporting

https://www.userinterviews.com/ux-research-field-guide-chapter/user-research-tools

Calendly

Qualatative

Calendly allows for smooth allocation of meetings. Manually having to arrange meetings with each user is very time consuming you have to make sure everyone is available, that there is sufficient buffer between interviews that you've not made mistakes with timezones, and that by the time the original invite has gone out you've not double booked. With a tool like calendly all this can be done with some initial configuration and a simple link to allow users to book times that suit both them and you.

There is an free plan with a limitation that it does not check all interview calendars for availability. Having more than 3 users and a Team plan from Doodle offers better value for money and a similar feature set.
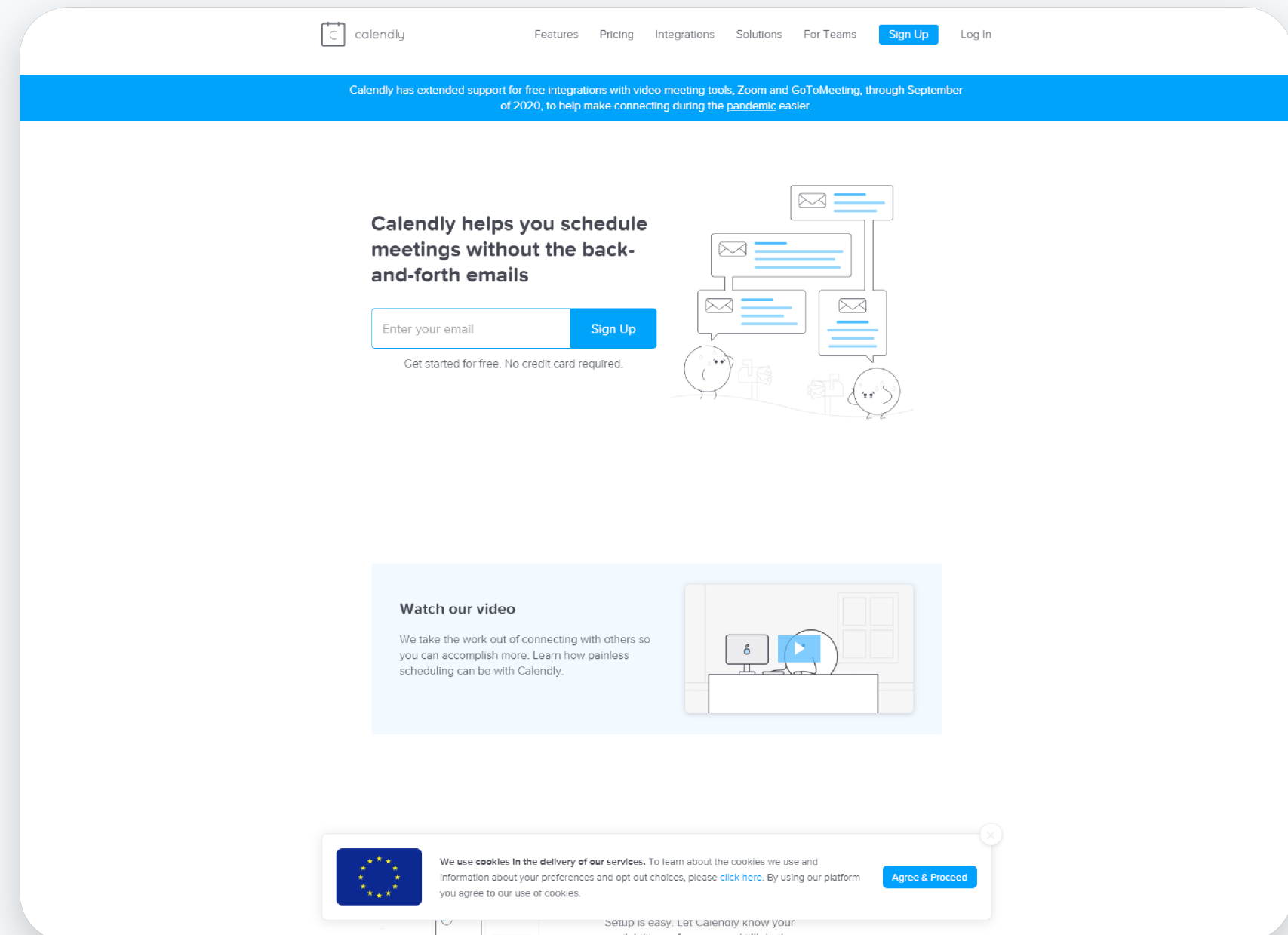
Lookback.io

Qualatative

Lookback.io allows researchers to run (un)moderated user sessions using their apps. With this tool you can record an interview and/or simultaneously broadcast it to colleagues who are observing. Everything is held in accordance with GDPR and can be exported for use in insight management tools like DoveTail and EnjoyHQ

https://lookback.io/features/live/
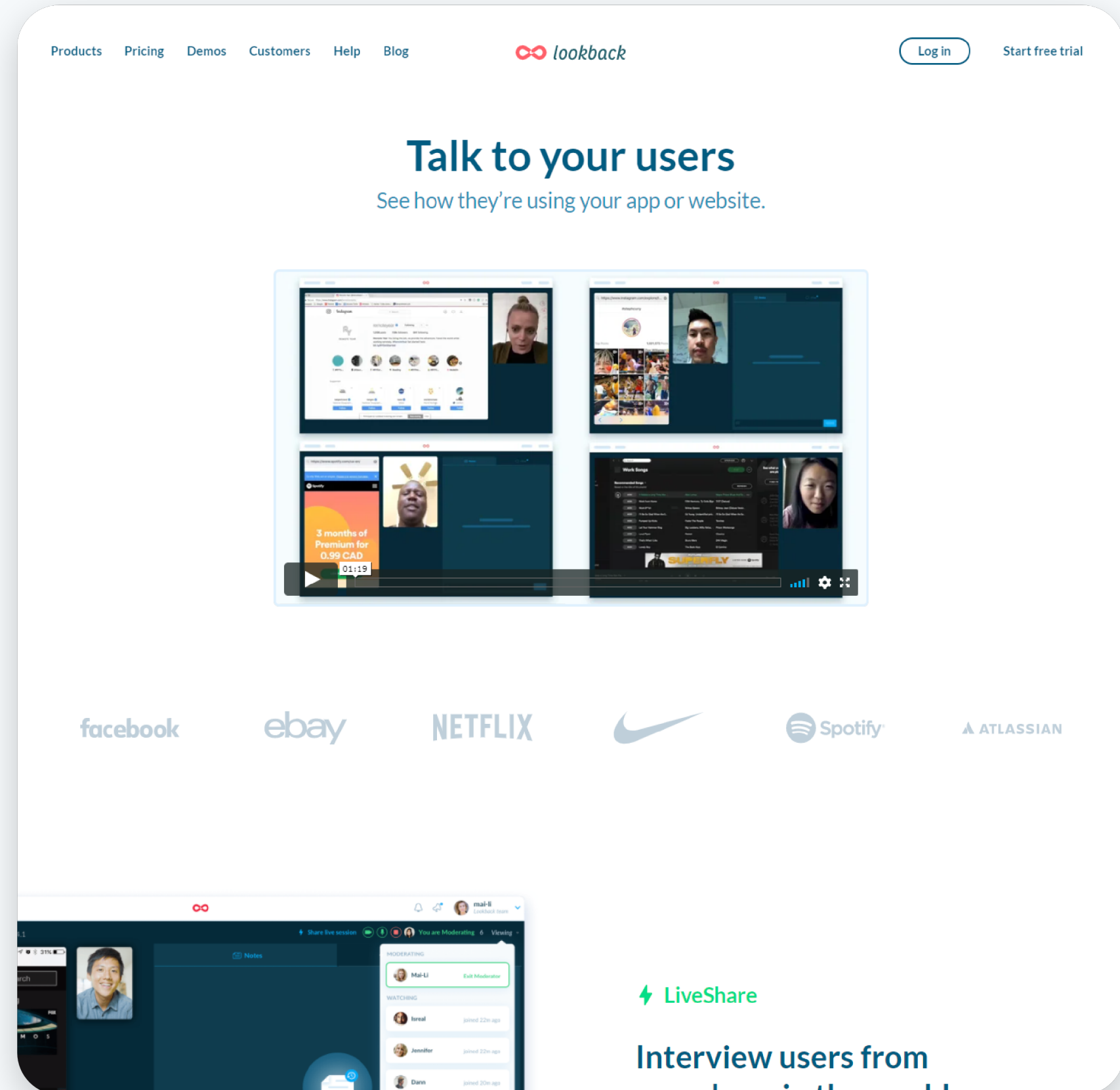
EnjoyHQ
Qualatative

EnjoyHQ is your research repository. Designed specifically for capturing and synthesising data from various sources.
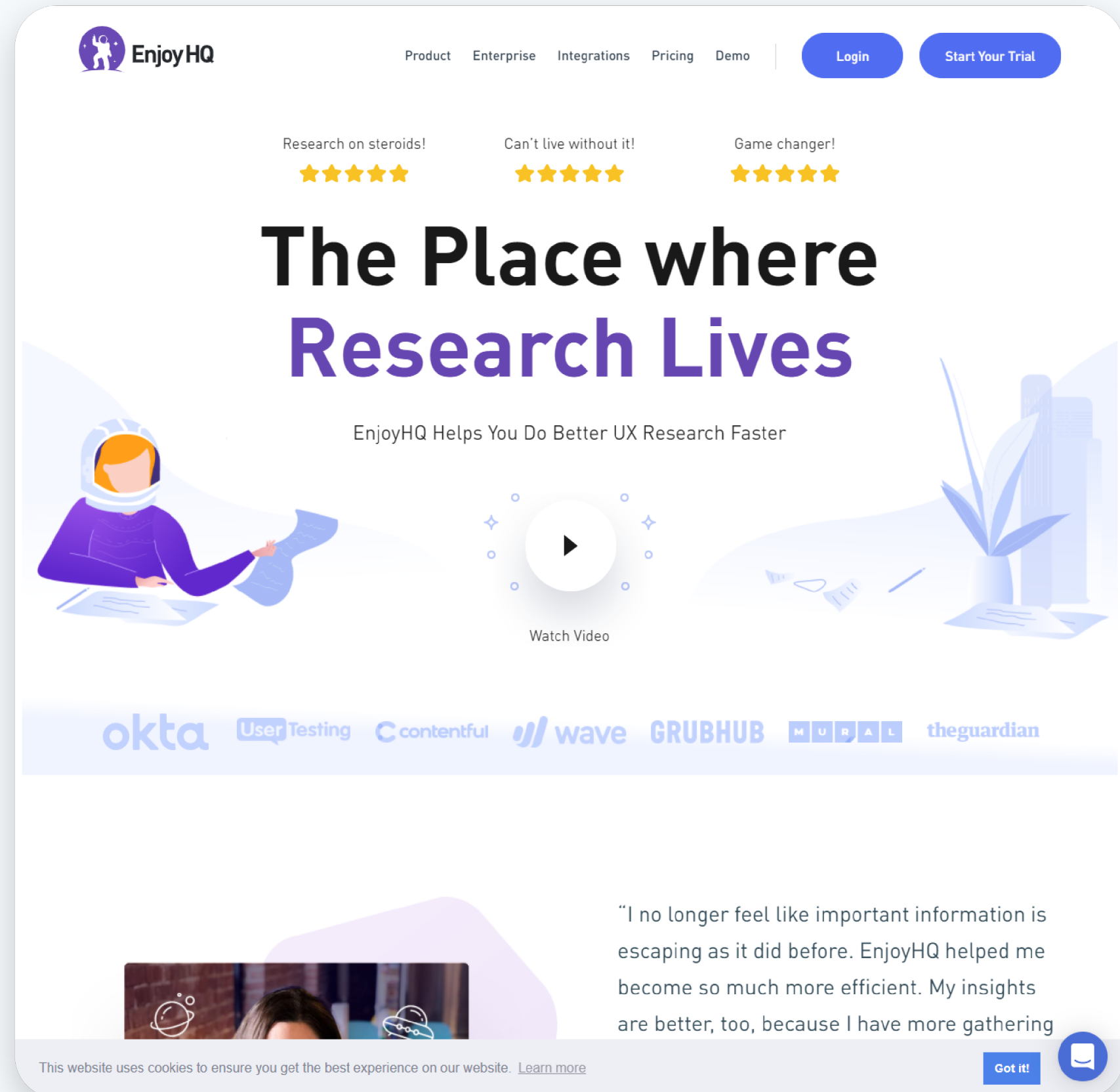
Data was previously stored in various places and other tools now you can import all your research materials into 1 succinct place.

Content used to get lost and dis-organised but these tools apply a standardised format so content is easy to find.

Being able to spot trends across projects is normally difficult but because of the organisation of content reports and automatons can be run across all projects. These tools have transcribing built in to take your videos and audio and turn it into searchable text to analyse.

There's a tonne of other features like sentiment analysis, slack integration, proper GDPR compliance and user governance out of the box.

https://lookback.io/features/live/

Glossary
User Centred Design Vernacular

Item	Description
Design	The outcome of intent. Anything that was intended can be considered design. For example: Natural Selection (not design), Selective Breeding (design)
UX	UX or User Experience, is the broad term to describe the interaction and their outcomes between a person and a thing. These are often referred to as Journeys or Jobs
UCD	User Centered Design refers to the process of placing the user at the center of the development process. It places the user needs above the business needs
Design Thinking	A collection of tactics popularised by IDEO to solve business problems using a UCD led approach
Discovery	A type of requirements gathering that is driven primarily by user research
Design System	A collection of UI elements that are documented for consumption by Engineers, Designers, and Product Managers
*.Ops	A role in an organisation that organises and empowers others in the organisation to maximise the outcomes of the discipline. For example: ResearchOps would organise research sessions and documentation of insights
Metrics	Metrics are measures that are deemed important by the organisation and are managed.

re+ ops

About this map

This map is the result of a global initiative by researchers for researchers to give shape to the emerging practice of ResearchOps. It's our V1.

It's the result of the analysis of data gathered via a survey and 33 #WhatisResearchOps workshops that ran around the world.

The map's intention is to give a framework for what ResearchOps is. As the practice grows, we expect this map will grow and be refined too.
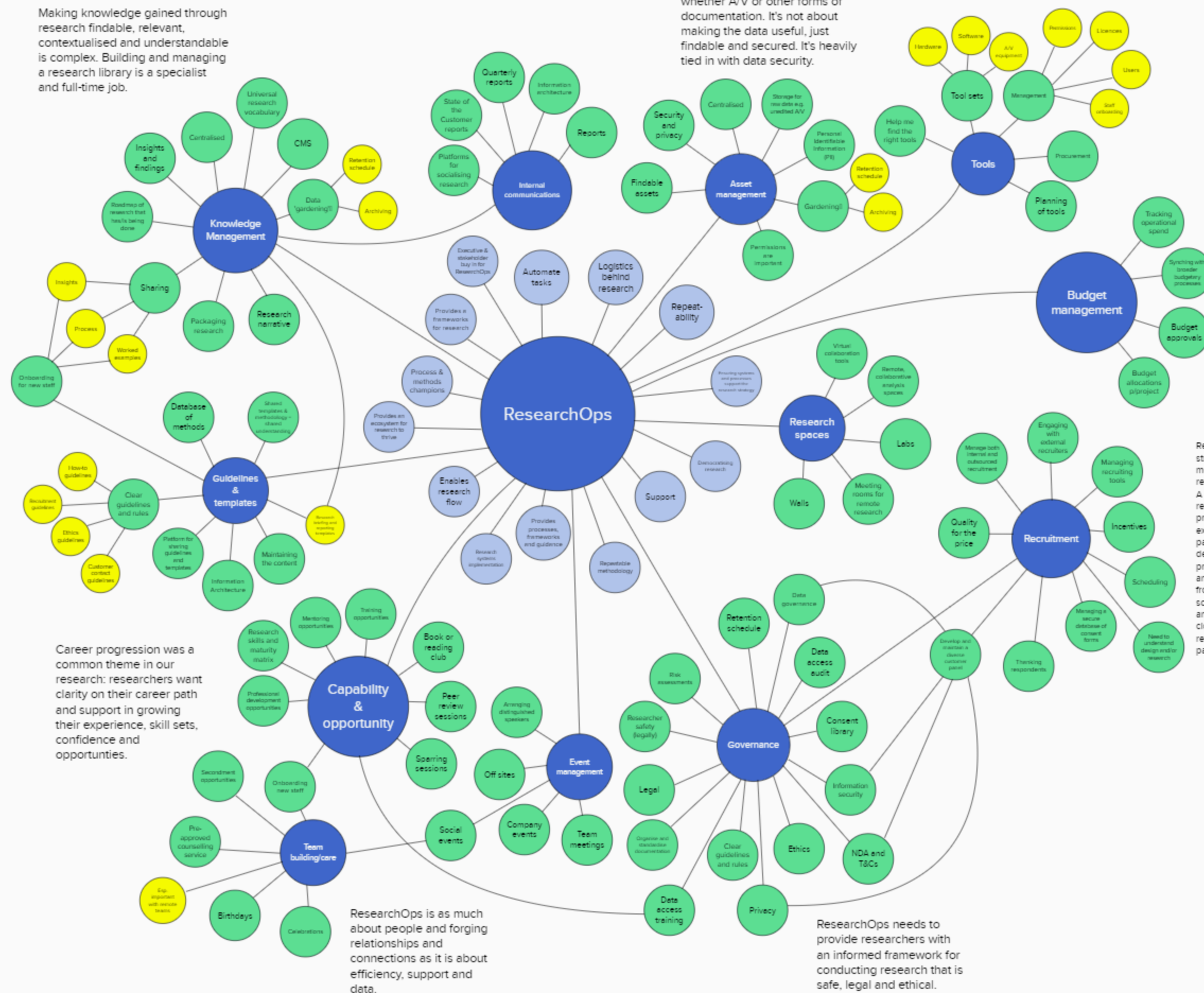
What about data security, privacy, and procurement?

Data security, privacy, and procurement should be considered in every ResearchOps element you deliver. They're ubiquitous; we've therefore not set them out as discrete elements.

Consider both quantitative and qualitative needs.

The needs of quant and qual are sometimes different; consider this in delivering each ResearchOps element. For simplicity, we've not illustrated this throughout the map; take it as given.

Making knowledge gained through research findable, relevant, contextualised and understandable is complex. Building and managing a research library is a specialist and full-time job.

Asset management is about where you store raw or processed data, whether A/V or other forms of documentation. It's not about making the data useful, just findable and secured. It's heavily tied in with data security.

Career progression was a common theme in our research: researchers want clarity on their career path and support in growing their experience, skill sets, confidence and opportunities.

Recruitment featured very strongly. It's one of the most common areas that researchers want support. A good research recruitment desk should provide both internal and external sources of participants, understand design and user research processes and needs, and handle the full sweep from sampling and screening, to scheduling and paying incentives, to closing the loop with respondents and participants.

ResearchOps is as much about people and forging relationships and connections as it is about efficiency, support and data.

ResearchOps needs to provide researchers with an informed framework for conducting research that is safe, legal and ethical.

Diagram node labels

ResearchOps

Knowledge Management — Universal research vocabulary, Centralised, CMS, Insights and findings, Retention schedule, Data 'gardening', Archiving, Roadmap of research that needs being done, Sharing, Insights, Process, Worked examples, Packaging research, Research narrative, Onboarding for new staff

Internal communications — Quarterly reports, Information architecture, State of the Customer reports, Reports, Platforms for socialising research

Asset management — Security and privacy, Centralised, Storage for new data e.g. unedited A/V, Personally Identifiable Information (PII), Retention schedule, Findable assets, Gardening?, Archiving, Permissions are important

Tools — Hardware, Software, A/V equipment, Premises, Licences, Users, Staff onboarding, Tool sets, Management, Procurement, Planning of tools, Help me find the right tools

Budget management — Tracking operational spend, Syncing with broader budgetary processes, Budget approvals, Budget allocations p/project

Research spaces — Virtual collaboration tools, Remote, collaborative analysis spaces, Labs, Walls, Meeting rooms for remote research

Recruitment — Engaging with external recruiters, Managing recruiting tools, Manage both internal and outsourced recruitment, Incentives, Scheduling, Quality for the price, Managing a secure database of consent forms, Need to understand design and/or research, Develop and maintain a diverse customer panel, Thanking respondents

Governance — Data governance, Data access audit, Consent library, Risk assessments, Researcher safety (legally), Information security, Legal, Ethics, NDA and T&Cs, Clear guidelines and rules, Data access training, Privacy

Guidelines & templates — How-to guidelines, Clear guidelines and rules, Recruitment guidelines, Ethics guidelines, Customer contact guidelines, Pattern for sharing guidelines and templates, Maintaining the content, Information Architecture, Database of methods, Shared templates & methodology / shared understanding

Capability & opportunity — Mentoring opportunities, Training opportunities, Research skills and maturity matrix, Professional development opportunities, Book or reading club, Peer review sessions, Sparring sessions, Swarm storm opportunities, Onboarding new staff, Pre-approved counselling service

Team building/care — Birthdays, Celebrations, Exp important with outside teams

Event management — Emerging distinguished speakers, Off sites, Company events, Team meetings, Social events, Organise and standardise documentation

Central ResearchOps nodes — Executive & stakeholder buy-in for ResearchOps, Automate tasks, Logistics behind research, Repeatability, Provides a frameworks for research, Process & methods champions, Provides an ecosystem for research to thrive, Enables research flow, Support, Democratising research, Ensuring systems and processes support the research strategy, Provides processes, frameworks and guidance, Research systems implementation, Repeatable methodology

Research

User engagement plan 2021

Legend

Tegra118 Clients	Accenture actions	Jigsaw actions	Tegra118 Staff	Done

Plan synopsis

Scope
This plan does not account for additional resource. It is not a roadmap of deliverables. This plan only accounts for the research activities and not other design driven activities such as designs for delivery or ideation workshops. Technical spikes have not been included in this research plan, as it is presumed these are carried out in other streams of the existing delivery pipeline.
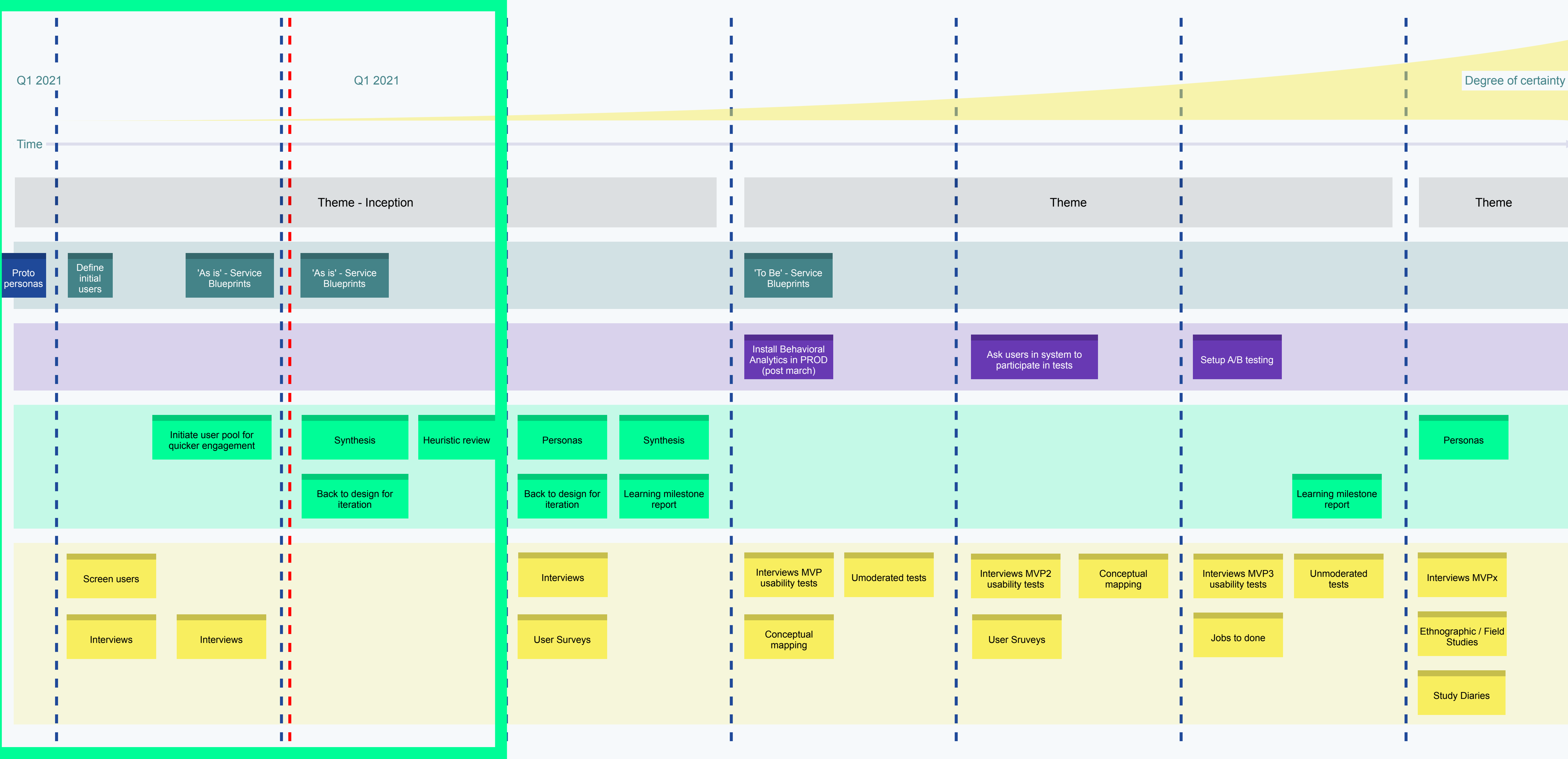
Stakeholders
The plan is broken into streams according to the key stakeholder. (See legend)

Degree of certainty
Our certainty of what we expect to work on explodes out exponentially over time.

Themes
Themes describe the core area which the discovery team is learning about in any given learning milestone.

Our first theme is defined as 'inception' for the team to understand basic user needs as told by the customer. Future themes will vary depending on the priority of the business.

Research Methods
Both qualitative and quantitative methods are shown that align to research 'themes'.

Degree of certainty

Time

Q1 2021   Q1 2021

Theme - Inception   **Theme**   **Theme**

| Proto personas | Define initial users | 'As is' - Service Blueprints | 'As is' - Service Blueprints | 'To Be' - Service Blueprints | |

| Install Behavioral Analytics in PROD (post march) | Ask users in system to participate in tests | Setup A/B testing |

| Initiate user pool for quicker engagement | Synthesis | Heuristic review | Personas | Synthesis | | Personas |
| | Back to design for iteration | | Back to design for iteration | Learning milestone report | | Learning milestone report |

Screen users		Interviews	Interviews MVP usability tests	Umoderated tests	Interviews MVP2 usability tests	Conceptual mapping	Interviews MVP3 usability tests	Unmoderated tests	Interviews MVPx
Interviews	Interviews	User Surveys	Conceptual mapping	User Sruveys	Jobs to done	Ethnographic / Field Studies
						Study Diaries

UR Plan

Research

User Engagement overview

As part of our effort to incorporate customer insight into the Product Design we are reaching out to users of Tegra118 products to better understand their user needs. This overview outlines the core elements that will be

Links

Design

- https://www.uie.com/ - Jared Spool's UX site
- https://www.nngroup.com/ - Don Norman et al UX organisation
- https://www.senseandrespondpress.com/lean-vs-agile-vs-design-thinking
- https://leaders.centercentre.com/ <- live course on design leadership

Tegra118

END.
Thanks for watching

by Ty Fairclough, DesignOps @ JigsawXYZ