

# Service definition

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**Red Badger for G Cloud 14**

May 2024

About us

# Red Badger is the Digital Product transformation consultancy

We help modern enterprises continuously evolve their products and services. We craft digital products customers love, build next generation platforms and embed new digital capabilities.



# 14

Years old, founded 2010

# +100

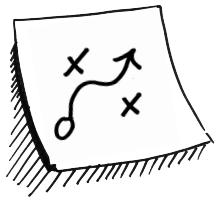
People

# +90%

Permanent, London team

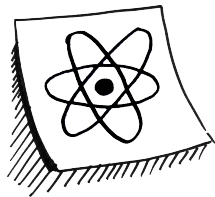


# We design and build digital products and platforms



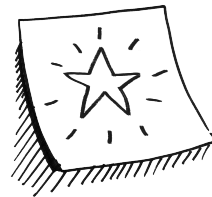
## Product

We craft seamless, compelling digital experiences users want and that provide greater value to all



## Platform

We develop digital product platforms upon which to deliver products reliably, safely and consistently



## Capability

We embed a digital product mindset and create a sustainable product culture at the heart of your organisation



# From inception to production



## Discovery

**Build the right thing**

2-8 weeks

Align your organisation around a progressive solution and delivery plan that secures funding and enables execution



## Alpha & Beta

**Build the thing right**

2-4 months

Pioneering, cross-functional, digital product squads that know how to design, build and deliver complex web and mobile products



## Live, Mobilise & Scale

**Build the right team**

When the time is right

Launch, optimise and iterate. Induct new recruits into a common digital product culture, ensuring delivery productivity is maintained, ultimately leaving you to operate independently



## Anticipated value

Accelerating delivery results in more effective delivery of public or programme objectives and lower operational costs.

### Speed to market

Ability to rapidly and efficiently launch products and services to meet ministerial commitments

- React quickly to real-world feedback
- Ability to innovate and keep products aligned with evolving sector demands
- Improve accuracy and consistency

### Product diversification

Identify product gaps and smoothly diversify and extend offering with minimum impact to end-users

- Reduce the risk of losing potential revenue
- Providing end-users with products that better meet their needs - a one-stop solution
- Enhance end-user satisfaction

### Operational efficiencies

Achieve cost savings and improve overall performance of internal teams  
Streamline and simplification of systems and processes

- Reduce effort and optimise resource utilisation, resulting in lower cost. Reduce single points of failure
- Reduction in errors, improved accuracy, quality and scalability
- Access to richer data, reporting and monitoring
- Improved staff morale and de-risk individuals





# Platform strategy & audits

Let's make things better



# Scalable, resilient, secure architectures

System architecture should focus on being evolutionary and radically simple\*, in order to enable a organisation domain, rather than simply following technology patterns.

This encompasses everything from technology choices, componentisation and communication, to the relationship between our software and organisational structures.

Technology choices must balance financial objectives, existing procurement frameworks and technologies, customer needs, and regulations.

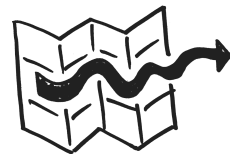
\*On complexity:

It's helpful to think about technology (and code) as a liability; expensive to buy/build and maintain, and so the less there is of it the better.

Complexity is a killer, especially accidental complexity, where, over time, solutions become more and more complex. It's vital to continually fight complexity and take every opportunity to simplify and consolidate.

Our technology team helps clients be bold and make good tech choices. We take great care not to lock ourselves into a particular vendor or solution, enabling us to change and adapt technology decisions, but minimise waste by anticipating future needs.

We believe that technology should be as invisible as possible to our clients which allows them to focus on delivering user and business value.





# Platform strategy outcomes

Continuous Delivery is **the** key capability a platform should provide in order to make these changes safely at pace.

A product platform built on a modular, flexible architecture enables gradual creation and improvement of the products using it.

Platforms should be treated as products, with engineering teams the customers.

We are trusted by our clients to lay the right foundations for their digital capability, advising on a breadth of fronts, from platform strategy to product roadmaps and team structures.

Typical outcomes of a platform strategy engagement are as follows:

**Validated architectural approach.** An architectural vision that meets organisation and technical requirements to cover:

- Foundational platform creation
- Approach to scaling and resilience
- Future capabilities in support of business strategy

**Modern engineering and delivery practices.** Observations and suggestions to enable greater agility to respond to organisation change:

- Embedding modern engineering practices
- How to deliver products on top of the foundation platform
- Approach to supporting live products
- Suggestions around setting up product teams for success

**Roadmap and delivery plan.** A value-driven roadmap which breaks down the architectural vision into milestones that can be delivered incrementally with end-user and org benefits gained at each stage.

- High level roadmap
- Suggested team makeup
- Prospective timeline for delivery





# Platform audits

For clients with existing platforms, we support ongoing evolution through custom technical and architectural audits.

These audits also cover ways of working to address additional undesired side-effects, such as ones caused by team alignment with technology platforms rather than product domains, and “feature factories” where teams focus on working through Jira tickets instead of end-user outcomes and value.

We are experts in product platforms and continuous delivery. We understand the complexities of digital product delivery at scale, and know the key to successful, sustainable digital product delivery is the ability to learn and iterate.

We audit current external and internal IaaS and PaaS hosting set-ups and optimise for financial, operational and organisational outcomes.





# Typical activities

Each audit is customised to our clients' needs, but might cover some of the following activities.

## Service implementation

- Structure, flexibility and testability on the unit level
- Efficient use of resources (CPU and memory) and networking
- Availability and fault tolerance techniques

## Application architectures

- Structure of microservices
- Communication pattern between services and from services
- Fault tolerance techniques (retries, circuit breakers, etc.)
- Use of caching
- Deployment pattern
- Number of service instances and node usage
- Load balancing, health and readiness checks
- Single points of failure

## Overall system bottlenecks

- Throughput constraints
- Queueing behaviour
- Resource saturation

## Engineering best practices

- Cloud native architecture
- Continuous Integration
- Testing and deployment automation

## Development process

- Collaboration boundaries, handovers and dependencies
- Feedback mechanisms
- Production deployment process and approvals

## Observability

- Performance monitoring
- Log aggregation, correlation and search
- Monitoring and alerting

## Operational maturity

- DevOps practices
- Process automation
- Incident response and resolution
- Overall development process performance



# **Product strategy & discovery**

Discovering the right problem to solve



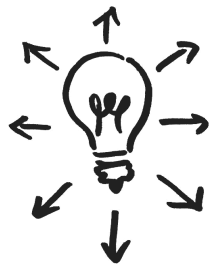
# Identify the right thing to build

A validated Product Strategy is central to digital transformation. It powers the introduction of new, innovative products and services, or optimisation of existing ones.

Our Discovery process focuses on understanding the problem, and establishing relationships with our clients in line with GDS guidelines.

We do this in fast-paced one week sprints, creating and testing ideas, using data to determine whether we proceed. This process focuses on waste reduction, and minimises the risk of building the wrong thing.

We start by co-creating a vision and establishing user needs, understanding their existing pain points and identifying opportunities.





# Typical outputs and approach

## **Territory identification**

Our clients typically have a number of areas they would like to improve so we help identify “territories” where innovation will have the most impact on their end users.

## **Research and ideation**

We define problem areas, by co-creating proto-personas, value stream maps, user journey maps & hundreds of hypotheses for testing. We test everything with real users, embedding analysis to measure our prototypes at every stage.

## **Value-based roadmaps**

We use data to plan short, medium and long-term roadmaps, with a focus on delivering maximum user impact. Our delivery background ensures every feature is technically feasible within the existing constraints. This provides a focus, and helps pave the way towards the ‘north star’ vision.

## **Organisational expectations**

We solve complex problems by ensuring we understand the organisation challenges and validate our assumptions before working on a solution.

## **Working with clients to achieve culture and business change**

Our process is designed to foster positive communication and working relations. We’re collaborative and transparent, working onsite and closely with our clients and other teams to maximise upskilling and knowledge transfer.

Our focus is on collaboration; and empowering our clients to be autonomous, so they are able to continue the process. We do this through coaching & mentoring, working side-by-side with our clients.

## **Service design at the heart**

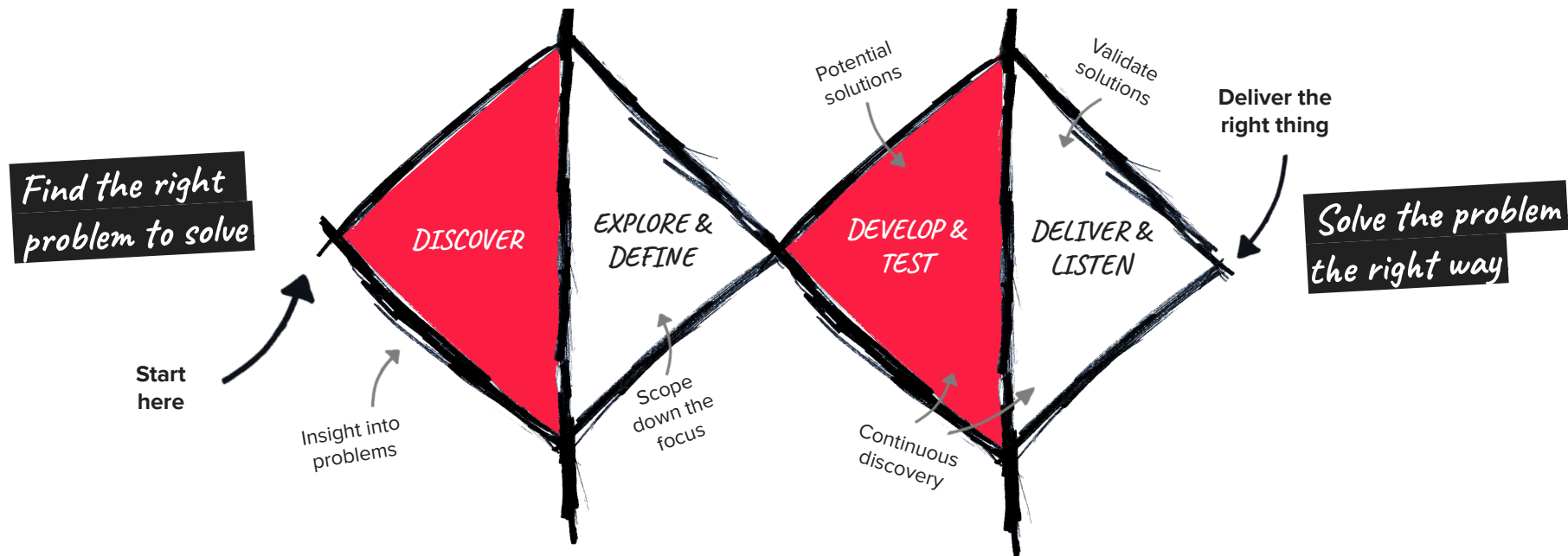
We help our clients improve customer experiences, create delightful products, become more user centric and achieve their organisation goals.

We deliver well defined, designed and executed services that meet users’ needs. We focus on rapid ideation, designing products (not documentation) just in time, and deliver quality fast.



# Impactful solutions that solve problems

We would take a design thinking approach, leveraging the “double diamond” to create problem definitions and design solutions that will meet the needs of our partners and end users.





# Data collection & insight generation

Empathising with end users is at the heart of creating good products and services, by truly understanding what they see, feel and experience. After digesting existing research completed our clients, we will use a combination of research methods to:

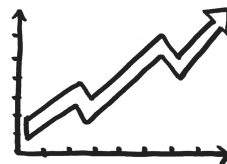
- Understand different user types and their challenges to create personas
- Create ideas that are relevant to these groups of people, and test that they will be successful in solving real problems
- Identify **which ideas have the most user and business value** by conducting further research and validating assumptions. We collect and analyse this information to prioritise work in the right way, and minimise bias.

The ethos of Discovery should be continuous even when the Discovery phase has finished, to quickly learn what works and prevent waste. We will utilise Lean UX and data-driven test-and-learn practices to continuously evolve our approach through Discovery, Alpha, Beta and beyond, and iterate our product roadmap. Some of the many techniques we use include:

- Testing low-fidelity mockups
- Guerilla testing
- A/B and multivariate testing
- Running usability tests
- Setting outcome KPIs for every experiment and feature to quickly validate or invalidate hypothesis
- Measuring outcomes and iterate to improve

This enables us to:

- Define everything with user stories
- Set validated goals for delivery (Alpha, Beta & Live) based on knowledge we've learned and outcomes we expect to achieve
- Define the problem
- Share everything we learn with the rest of the organisation to support their own product and project outcomes





# **Delivering outcomes**

Digital Product Delivery





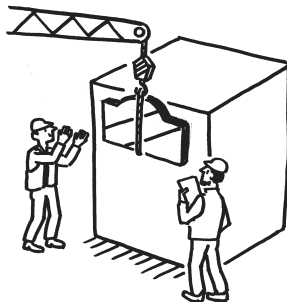
# Build it the right way

Digital Product Development is our full service, cross-functional approach to deliver value into the hands of our client's customers.

Throughout Alpha & Beta phases, we continually look to validate that we're building the right thing that solves real user problems and prevents waste.

We aim to build the right thing in the right way in order to deliver great quality products and services with speed. We do this with multi-disciplined teams helping our clients become more customer-centric, be bold with technology and improve efficiency with lean practices.

We co-locate and integrate with client teams to share knowledge, increase confidence and build capability.





# Cross-functional teams

## User Experience & Product Design

Our User Experience and Product Designers deliver well defined, designed and executed products and services that meet users' needs. We focus on rapid ideation, designing working products not documentation, just in time, to deliver quality to users fast.

## Technology Team

Our Technology team help our clients navigate the DevSecOps, Open Source and Cloud revolutions and to be bold with tech choices. Technology should be as invisible as possible to enable you to focus on delivering business value. By being tech agnostic, aiming to choose the right tech for the job and being meticulous in our engineering practices, we enable continuous delivery, speed to market and create value for customers quickly.

## Agile Delivery

Our Agile Delivery Leads are expert practitioners who set the project direction and align, plan and deliver using lean and agile techniques. We aim to realise business goals and improve the lives of our client's users.

We do this through a highly transparent agile delivery process which removes the guesswork, and arms clients with the facts. Progress is demonstrated continuously and there are short feedback loops so that the direction can change but the team remain focused.





# Core concepts

## Continuous deployment

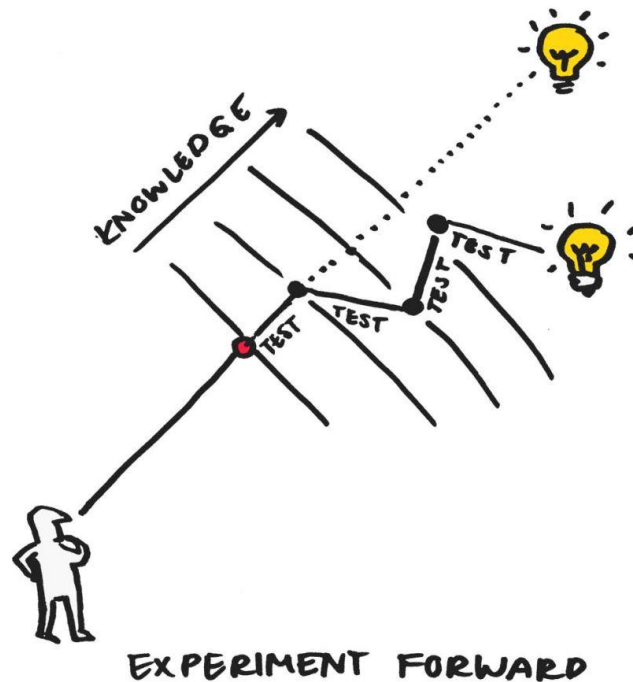
We put working software in the hands of customers as soon as possible, continuously delivering measurable increments to deliver value faster. Utilising feature flagging, A/B testing, and multivariate testing, we enable safe experimentation and de-couple software deployment from feature release.

## Transparent and highly-visible

All stakeholders should be brought along the journey together, and we believe this is best achieved through regular demos, transparent reporting, and continual playback of analytics & insights.

## Shift left on testing

We advocate that all testing - integration, performance, penetration, accessibility & user acceptance testing - be “shifted left”. That is to say, it should be carried out early and often instead of at the end of a project. Highlighting risks and issues as early as possible ensure remedies are at their most cost effective.





# Governance & transparency

Red Badger's usual approach to governance and stakeholder engagement echoes our core values. **We believe in open, transparent and collaborative governance** that ensures team and project success.

From the outset of our partnership we will establish a clear governance framework and a communications cadence specifically designed to ensure **all stakeholders are receiving accurate, timely and up to date information.**

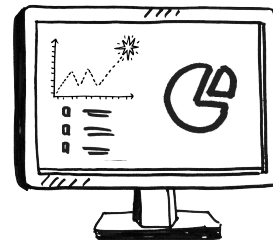
We will work with our client stakeholders to review progress, goals, scope and delivery plans to ensure we are focused on delivering the highest value first. This may be responding to changing business requirements or to feedback we receive from your partners and customers.

A plan to engage the right stakeholders will be made early on in the engagement. Sponsors and exec level stakeholders will require a different set of information to the Product Owners and delivery teams. **We will ensure up to date, accurate information is created and shared at the appropriate levels.**

## Alignment with existing internal technology governance meetings e.g.:

- Change Review
- Architecture Design Meeting
- Enterprise Architect meeting

Red Badger will ensure they have the right attendees at these sessions and regularly attend to ensure alignment and input into key decisions. This would typically be the **Tech Lead** or Technical Director.





## Non-functional principles



### Intentional experiences

Intentionally design the user and developer experiences using best-in-class tooling throughout the build process, getting feedback to iterate and validate the approach.

A focus on developer experiences improves efficiencies within internal teams, and aids with smooth transition to internal teams.



### Always learning

We're constantly discovering new approaches, trying new tools and evaluating the latest technologies.

This fuels our engineering capabilities and means we have a broad set of experiences and an extensive toolbox to choose from when deciding on how to solve new problems.



### Simple solutions

Simplicity matters. When designing systems, complexity should be reduced to the absolute minimum. Systems should be composed from small building blocks that clearly do one thing and do it well.

When evaluating tools, the ability to declare intent simply and explicitly is the main design feature we look for.



### User-centricity

User needs always come first - they're what drive our engineering decisions.

Technology should be used to solve users' problems in new and better ways.

Digital products have an unparalleled ability to gather user insights and adapt and evolve accordingly to meet individual users' needs even more closely.



## Non-functional principles



### Software Delivery Performance

To ensure our teams deliver digital services to customers, make changes to them, and operate them with minimum disruption we look to employ a technical measurement framework based on the DORA metrics that measures

**Lead Time, Deployment Frequency, Time to Restore Services, & Change Failure Rate.**

A high performing team, delivering quality software will score well in all four of these areas.



### Observability

Having transparent and full visibility of how a system operates is a must when it comes to complex, distributed platforms. Our teams take great care to ensure that applications and services are instrumented with the detailed Application Performance Monitoring, Logging and Alerting.

This allows us to know if a system is healthy, and if not, gives us the information and tools to quickly diagnose and issue and resolve in minutes rather than hours or days.



### Cost-effective scaling

The cloud has given engineers great flexibility when it comes to building large service-based architectures, however we know that costs can quickly escalate. When designing solutions, we take into account total cost of ownership to ensure that not only is the solution scalable to meet user and business demands but is also affordable.

This is where technologies such as auto-scaling services, serverless, and scale-to-zero can be utilised.



### High-availability

We design all our systems with high-availability in mind. We follow modern best practices to ensure platforms are self-healing with auto-recovery, failover, and redundancy at the service level with multi-region availability.

We will ensure that the design of the system reflects the SLA requirements and will have mitigation strategies in place to limit outages and maximise uptime.

# Collaborative documentation

### Evolutionary documentation

We advocate for the use of collaborative Wikis (Confluence, Notion or similar) that allows for collaborative, evolutionary documentation process. Openbook project reporting lives side-by-side on the same platform. Documentation is considered a NFR, not an afterthought.

### One team

Our client teams would be able to collaborate on all documentation, depending on agreed roles and responsibilities agreed, supplementing SME knowledge.

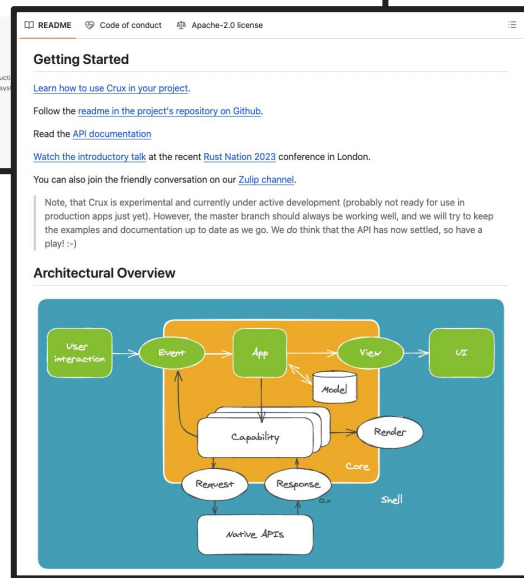
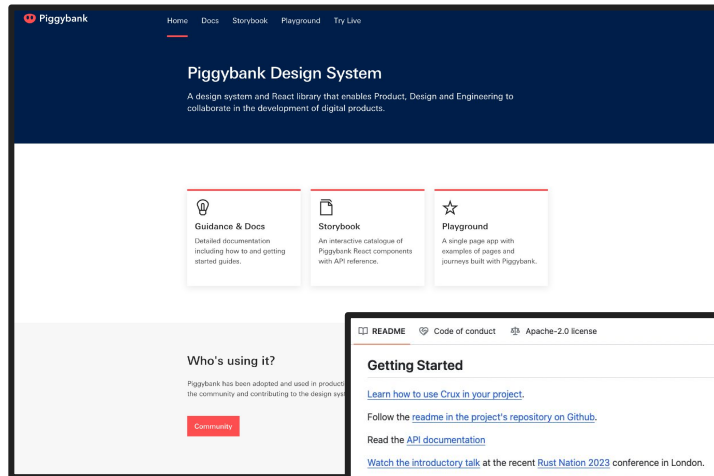
### Architecture Decision Records (ADR)

We use ADRs to document choices the team makes about any significant aspect of the software architecture they're building.

### Design guidelines

Design decisions and guidelines are equally important to document, adding to the library of living documentation that evolves as the digital product emerges.

We also use documentation to facilitate knowledge circulation with stakeholder groups, if appropriate. This might take the form of one-pagers, insights summaries, and assets from weekly demos.





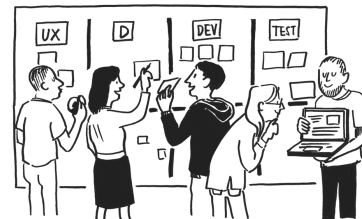
# Delivery principles

When it comes to delivery, the goal is the shortest, safest and most sustainable lead time for the best quality and value. We focus on minimising waste and maximising value, using a set of core principles:

- **Optimise the Whole** by partnering with our clients to take accountability for value outcomes
- **Respect people** by empowering teams and shared accountability for outcomes leads to best creative solutions
- **Built in quality** ensuring the solution reflects quality standards throughout via TDD and automation. Quality is not added later.
- **Amplify learning** encourage systematic learning throughout by working in cross functional teams accountable for outcomes
- **Decide as late as possible** so that we avoid making critical decisions that will be difficult to change if needed
- **Deliver as fast as possible** by building simple solution quickly to enhance incrementally based on real customer feedback
- **Eliminate waste** in the process which is anything that is non value adding by removing bottleneck, blockers and impediments

As programmes scale, a number of further factors become important to consider:

- **Visibility and transparency** using tools such as information radiators, programme reporting and expectation and escalation management
- **Alignment and coordination** via scrum of scrums and programme cadence and governance
- **Collaboration** making policy explicit and establishing working groups, Guilds and team “contracts”
- **Decision making** distribution using working groups, steering committees and documentation
- **Tooling** such as JIRA/Confluence, Miro and Asana





# Delivery cadence

We typically adopt the **tools and working practices** that our clients use to make communication and team collaboration easy. As a result, we are used to working with many tools in the market. Examples such as Confluence/JIRA, MS Teams, emails, Figma, Asana and Miro.

**Agile Delivery Leads** are accountable for facilitating planning ways of working, and ensuring continuous and transparent tracking and reporting of progress, milestones and RAIDs.

Red Badger's **dedicated Director** will also ensure the end to end quality and delivery success across the engagement.

A typical, minimum, set of ceremonies is as follows:



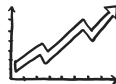
### Standup (Daily, 15 mins)

Attended by the full core project team. Available for any stakeholders to join.



### Check-in (Weekly, 1 hour)

Walk-through of our weekly report, providing full transparency, collaboration and enabling immediate actions to be taken



### Retrospective (Fortnightly, 1 hour)

Full core project team reflects on learnings and improvements.



### Steering Committee (Bi-weekly, 1 hour)

Review progress and align on the plan for the subsequent month, essential to ensure continual buy-in from stakeholders



### Service Reviews (Monthly, 1 hour)

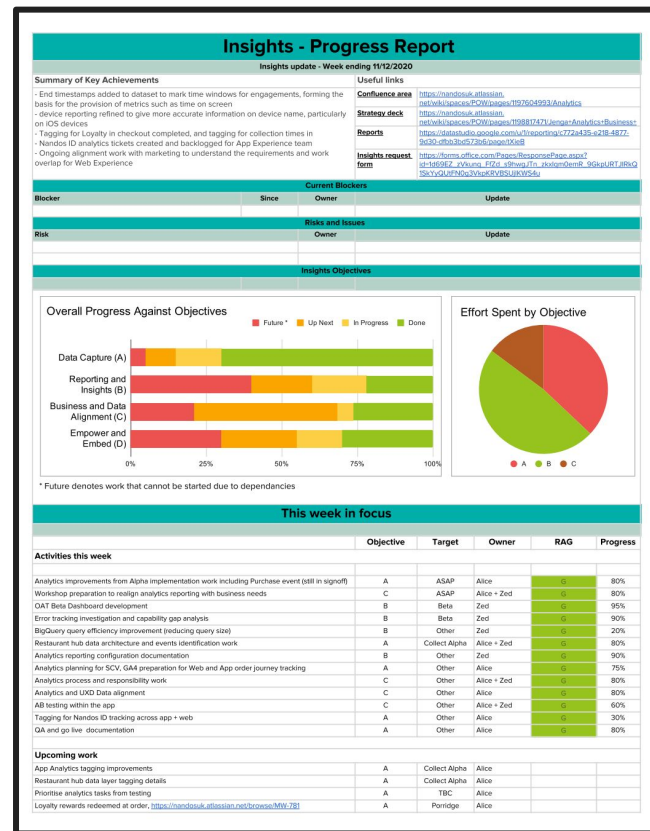
Ensure stakeholders are satisfied with Red Badger, share feedback

# Delivery reporting

Our reports will be formulated based on the tailored engagement strategy that we define together as a collective. However, a typical weekly report includes:

- Exec summary
- Key achievements
- Key decisions
- Blockers
- RAID log
- Progress towards milestones/specific objectives
- Team time allocation (e.g. user stories, meetings, spikes)
- Activities, owners and RAG status
- Roadmap progress
- Board level or business strategy reporting

Red Badger will encourage active participation and feedback from stakeholders to ensure the reporting provided is doing the job it was intended to do.

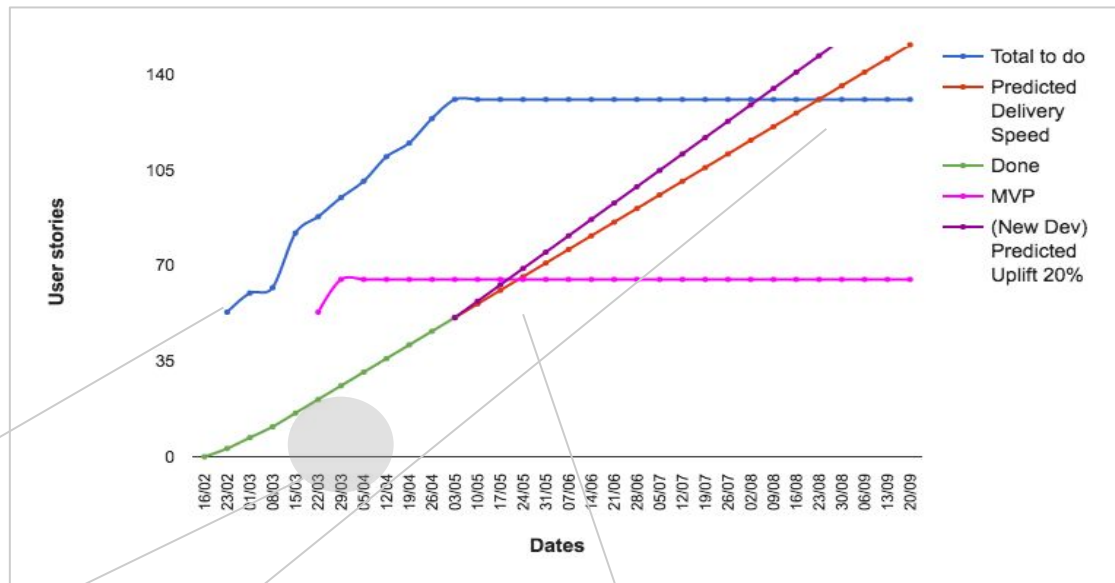




## Example: delivery forecasting

To support collaboration, enable timely decision making, and coordinate with the wider business initiatives, complete transparency about the status and progress of the work is key.

Regular reporting provides this along with a forecast of future progress and a managed risk register.



*The backlog grows as the team breakdown epics and the business agrees scope*

*Average throughput here is five stories a week, six with an additional developer*

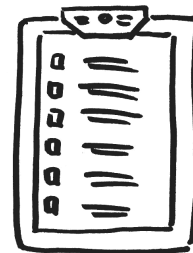
*The point at which the forecast hits the total number of known user stories tells us when we can expect to complete everything*

*We can forecast a single epic, MVP or milestone*



## Security & data: good practice + good experience

- Red Badger's engineers adopt the practice of "Secure by Design and Default" - ensuring leading industry practice is followed, including:
  - Ensuring data is encrypted at rest and in transit
  - The principle of least privilege is applied (ie. single tenanted cloud infrastructure)
  - GDPR adherence
  - We advocate for, and partner with, objective 3rd parties to conduct security testing of our work
- Whilst we have lived experience of working many regulated environments (JP Morgan, HSBC, MHRA, LME etc) - we treat all our clients data and security with the same care and respect
- Security & regulatory requirements are treated as key deliverable, captured within acceptance requirements
- Our QA team are involved throughout the development process, ensuring the context of all security/regulation requirements are constantly monitored throughout the development process





# Thank you

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