



# G-CLOUD MACHINE LEARNING & PREDICTIVE MODELLING

SERVICE DEFINITION



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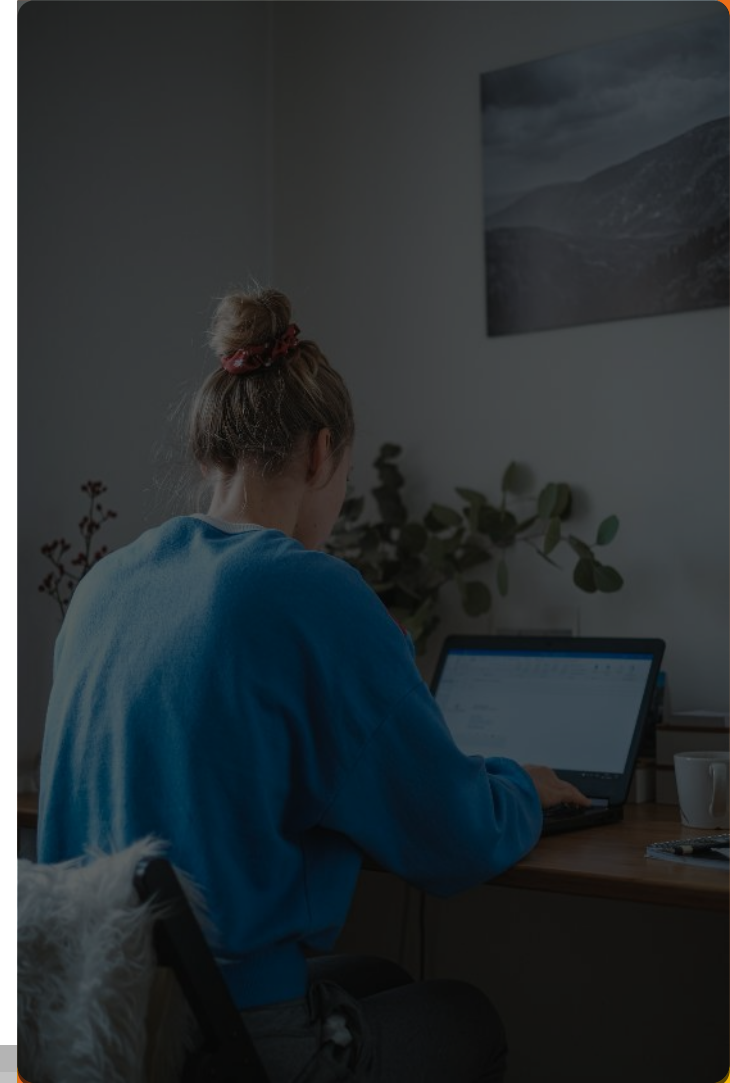
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# Hello, we are Transform

Transform is a future company.

The world is changing. Problems don't look like they used to. These days, disruption is the new normal and connectivity means complexity. That's where we come in. We curate small, diverse teams who help our clients figure out where to go next.

**We are Transform.** With the creativity of an agency, the robustness of a consultancy and the technical agility of a start-up, we transform organisations.

We combine depth of expertise with a breadth of experience, working across both public and private sectors to deliver tangible outcomes in partnership with our clients, built on a philosophy of transparency, collaboration and agility.

We understand that every challenge and opportunity is different, so every solution should be too. That's why we combine data, insight and strategy to design and build bespoke solutions to get organisations fit for the future, both inside and out.

We deliver work across both the public and private sectors spanning data, technology, consultancy, customer experience, research, organisation and culture change. No matter who we're working with, we deliver tangible results that have real organisational impact.



# SERVICE OVERVIEW





# Introduction

We use a wide range of tools to deliver everything from Single Customer View and CRM to predictive analytics and platforms for Data Science, Machine Learning and application of Artificial Intelligence for our clients.

- **National Citizen Service (NCS).** Developed an analytical investigation platform on Google Compute Services, using a range of technologies - Compute transform in concert with Dataflow and Big Query serving results back through their Einstein BI platform.
- **BWM MINI.** Established KPIs, developed reporting frameworks, automation of reporting and measurement. Bespoke analytical projects answering specific questions or generating insights to support decisions, using R/Python/SQL/Tableau/PowerBI.
- **Domino's Pizza.** Developed a complete master data management service built on Azure Data Factory and CosmoDB. The pipeline ingests over 5m/daily transitional records and exposes cleansed data and insight via an API tier we developed.
- **Toyota/Lexus.** Used machine learning and other predictive modelling techniques to predict actions and outcomes. Using supervised learning and unsupervised learning algorithms, Bayesian networks, regression analysis.

## Data Management



SQL MS Azure Data Factory | BLOB Storage | PaaS servers on MS Azure Cloud.

## Create & manage single customer view



Transform proprietary matching algorithms

## Data & Martech



CDP | CEP | DMP | ESP | Salesforce | Adobe | Thunderhead | Kitewheel | Tableau

## Data Integration



API | Azure Data Factory | integration with MS Azure & AWS

## Analytics & Reporting



R | Python | SQL | Tableau | PowerBI

## Advance analytics & Research science



Learning algorithms | Bayesian networks | Regression analysis

## Digital / Web analytics



Google Analytics | Skyglue | DMP | Thunderhead | Celebrus | Kitewheel | RedAnt | AppAnnie | Urban Airship

## CRM Strategy



Google Analytics | Skyglue | DMP | Thunderhead | Celebrus | Kitewheel | RedAnt | AppAnnie | Urban Airship

## Personalised marketing



Salesforce | Adobe | Dotmailer | Smartfocus | Adestra | Thunderhead

# The world is divided into those who **disrupt** and those who are being **disrupted**

We want to put data at the heart of our organisation



We don't use customer data enough



Data is not something we've traditionally looked to.



We need to elevate the role of data in the organisation



Help me design connected experiences from back office to end users



We want to become more data-driven but don't know where to start



What is it?

What does it mean?

What it might look like?



### Understanding

Widespread understanding of the data held, what it is, and what it can be used for.

Direct access to data teams, with the ability to shape priorities based on an understanding of a value of the data.

Use case driven analytical and development sprints defined by the product stakeholders.



### Insight

Adoption of the data so that each individual is able to use it to develop insight to improve business understanding.

Hands on access to data directly from the database.

Ability to pull data to create reports and develop insight.

Proactive decision making, with the ability to define strategy.



### Usage

Using data and insight to develop strategies and create new initiatives.

Ability to develop initiatives, based on insight, and then action them directly.

Proactive initiative implementation, supported by a test and learn strategy.



### Action

Each individual is able to run and evaluate proactive data driven initiatives. Autonomously iterating ideas that feed into a wider strategy.

Ability to feed into programmes that automatically evaluate, iterate and improve.

Contributing in the development and improvement of dataled "Always On" activity.

Always on programmes, focusing on continuous optimisation.



# Continuous, iterative design with the principle of build on what works, change what doesn't



## Discovery



## Proving the concept



## Building the future

Our 3-phased approach is designed to quickly assess current capability from a data-enablement perspective, but also to gauge how well the current culture could support a more data-driven approach, and effectively prioritise future initiatives.

### 01

**Discovery.** Will result in a baseline assessment of capability and a set of hypotheses to be tested.

### 02

**Proving the Concept.** This phase will deliver a proof point to the business – an example of how data insight, used in Agile environments, can affect change inline with business strategy whilst also demonstrating commercial value quickly. From insight gained in Discovery we will create a set of initiatives to deliver incremental value.

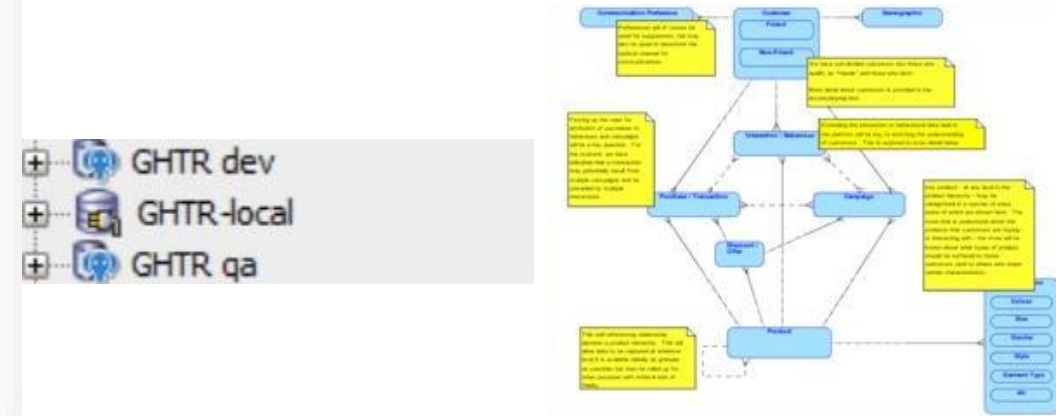
### 03

**Building the Future.** Once the efficacy of the approach is proven, Phase 3 is the further roll out of data-driven initiatives across the organisation inline with business strategy.



**Data products and services are a wide subject, therefore we adopt a build, iterate, learn model**

- Cloud environments are preferred for easy scaling
- Security designed in from the start
- Time spent on data modelling is seldom wasted
- Technology is usually less important than data structure and quality
- Develop data prototypes and iterate
- Keep it as simple as you can
- Make it as complicated as it needs to be
- Component-based approach enables plug'n'play
- Learn from your successes and from your mistakes



Code | References | Errors | Details | Grants | Profiles | Dependencies

```

create or replace package skill as

type r_skill_type is record (id number, name varchar2(30), rarity number);
type t_skill_type is table of r_skill index by pls_integer;

procedure calculate_rarity (p_skill in out r_skill_type);

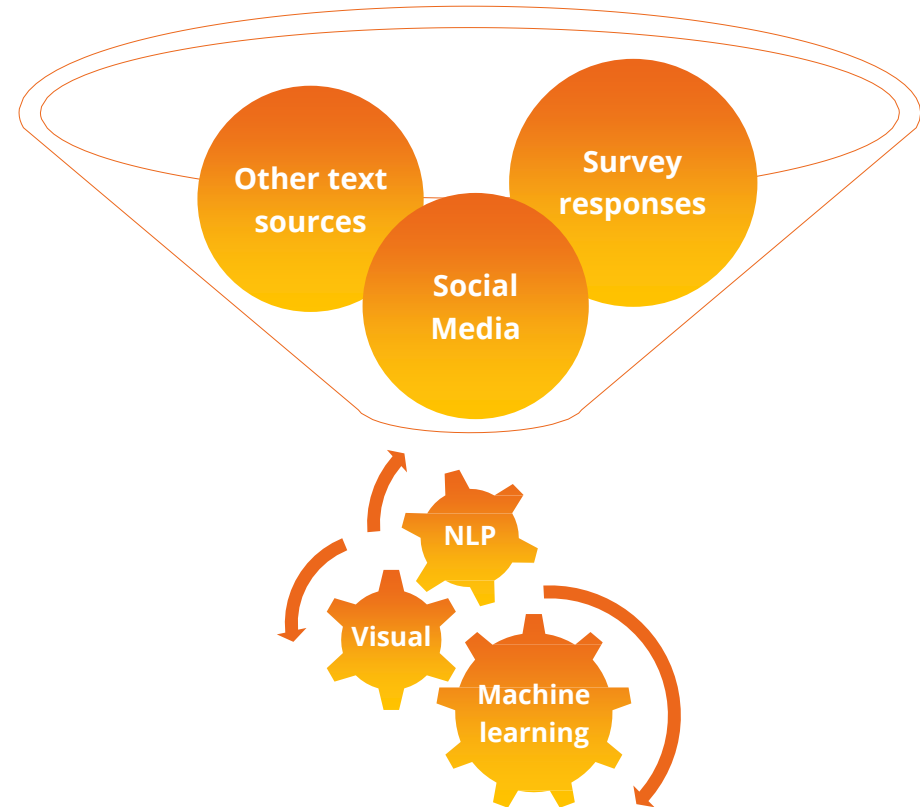
procedure calculate_rarity (p_skill in out t_skill_type);

end skill;

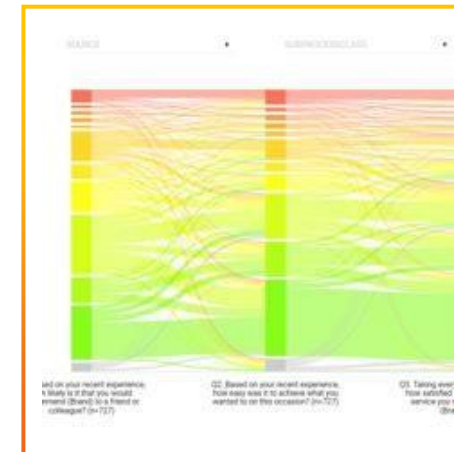
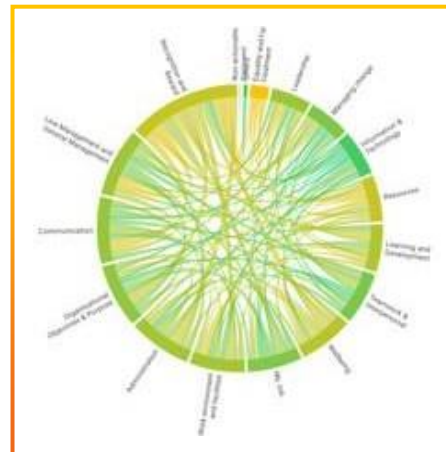
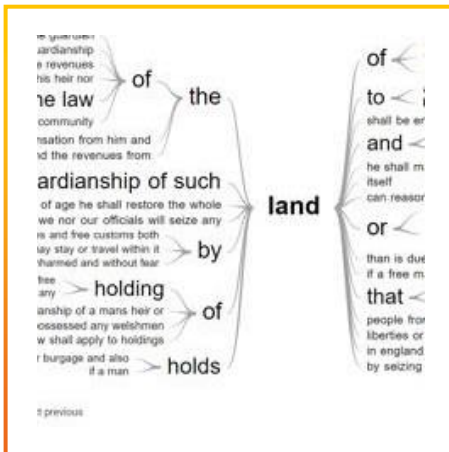
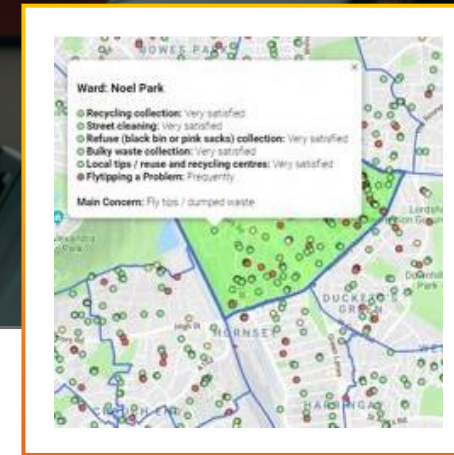
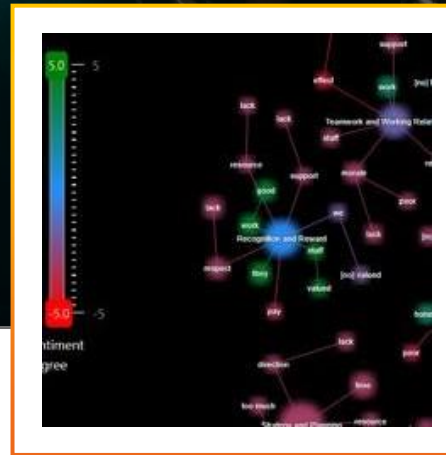
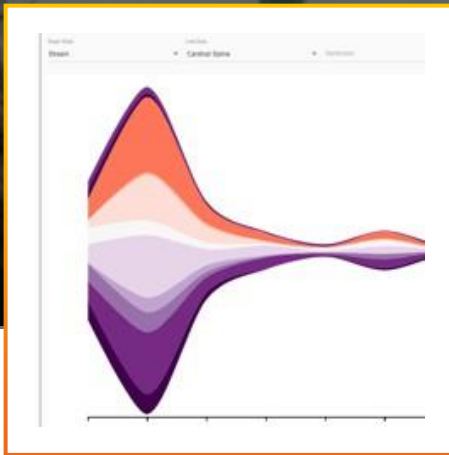
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# We use a range of sources, techniques & tools to deliver the insights that drive better decisions

- We can take text from a variety of sources including: Social Media, Surveys, Databases, Files and even handwritten letters
- Initial investigations are conducted using Natural Language Processing (NLP) to discover relevant classifications. This can then be transposed into Machine Learning algorithms or NLP microservices.
- Text classification can then be used to drive further statistical models or used directly in visualisations for instant analysis



# Data visualisation to highlight trends, connections and **impact of services**





# Our work is underpinned by the following governing principles

## Users:

Always begin and end with users. They must be at the centre throughout, with services based on their needs, behaviours, capabilities, opportunities and motivations and barriers.

## Co-Design

Collaborating with teams and departments across government to build services that deliver the policy and proposition intent – so a service meets user and business expectations.

## Sustainability:

Creating a sustainable, open and scalable model – simple to deliver, simple to replicate and reuse.

## Innovation:

Establishing a digital innovation culture – looking for opportunities to improve but not for the sake of it.

## Transparency:

Being transparent on governance – being clear on who owns the service and information.

## Great design:

Advocating 'great design' – not just what it looks like but how it works – which excites users and delivers the optimum experience

## Consistency:

Being consistent but not predictable – testing the boundaries but ensuring we don't break the experience. Building on what already works well and change what doesn't – it's not about cutting corners, it's about the most effective solution

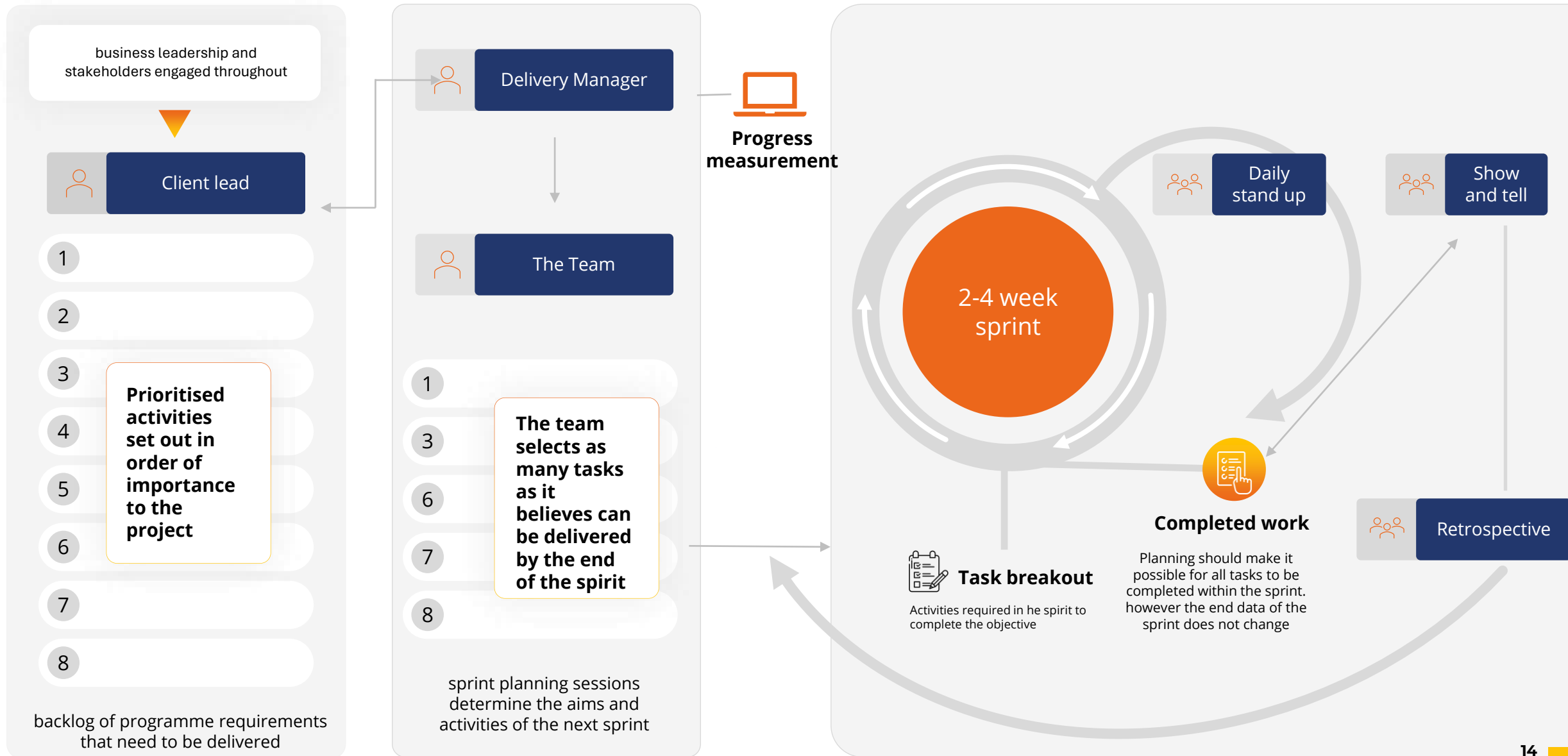
## Lifecycles:

Like any product or services – we must consider the entire lifecycle – understanding the process doesn't stop at launch and must be continuously iterated and improved.

# PROJECT DELIVERY



# Transform Is agile by default and a leader in agile delivery in government





# An agile approach that is more than just a **project management methodology**

The use of Agile ensures that the delivery meets both the product owners' and the end users' needs. The proposed approach is based around scrum and has the following elements:

- Development and content direction through use of a Product Owner
- User Stories for requirements
- Project communications using Daily Stand-ups
- Project tracking using a 'Kanban'
- Delivery management using Planning Poker and measurement of delivery velocity
- Testing and acceptance through the use of Show & Tells
- Project feedback and delivery improvement using Retrospectives

Our projects start with a short phase Iteration 0 / Sprint 0; This phase maybe 1-2 weeks for a short project to 4-5 weeks for larger projects. This phase is used to ensure that all the pre-requisites are in place so that the software and content development can progress quickly. The initial phase may include some or all of the following:

- ✓ Conduct initial research and set the curative direction
- ✓ Build a panel of future users to help test the site and content during development
- ✓ Create the core User-Centred Design assets
- ✓ Define the software and environment architectures
- ✓ Set-up and test the software build processes and automated test and deployment capabilities
- ✓ Install the initial development and testing environments
- ✓ Develop a set of initial code on the platform to test that the development and environments work seamlessly together

# Agile delivery principles to provide the best results

01

Bring out the  
best in people

02

Multi disciplinary

03

collaborative

04

User-led

05

Co-located

06

Embedding agile

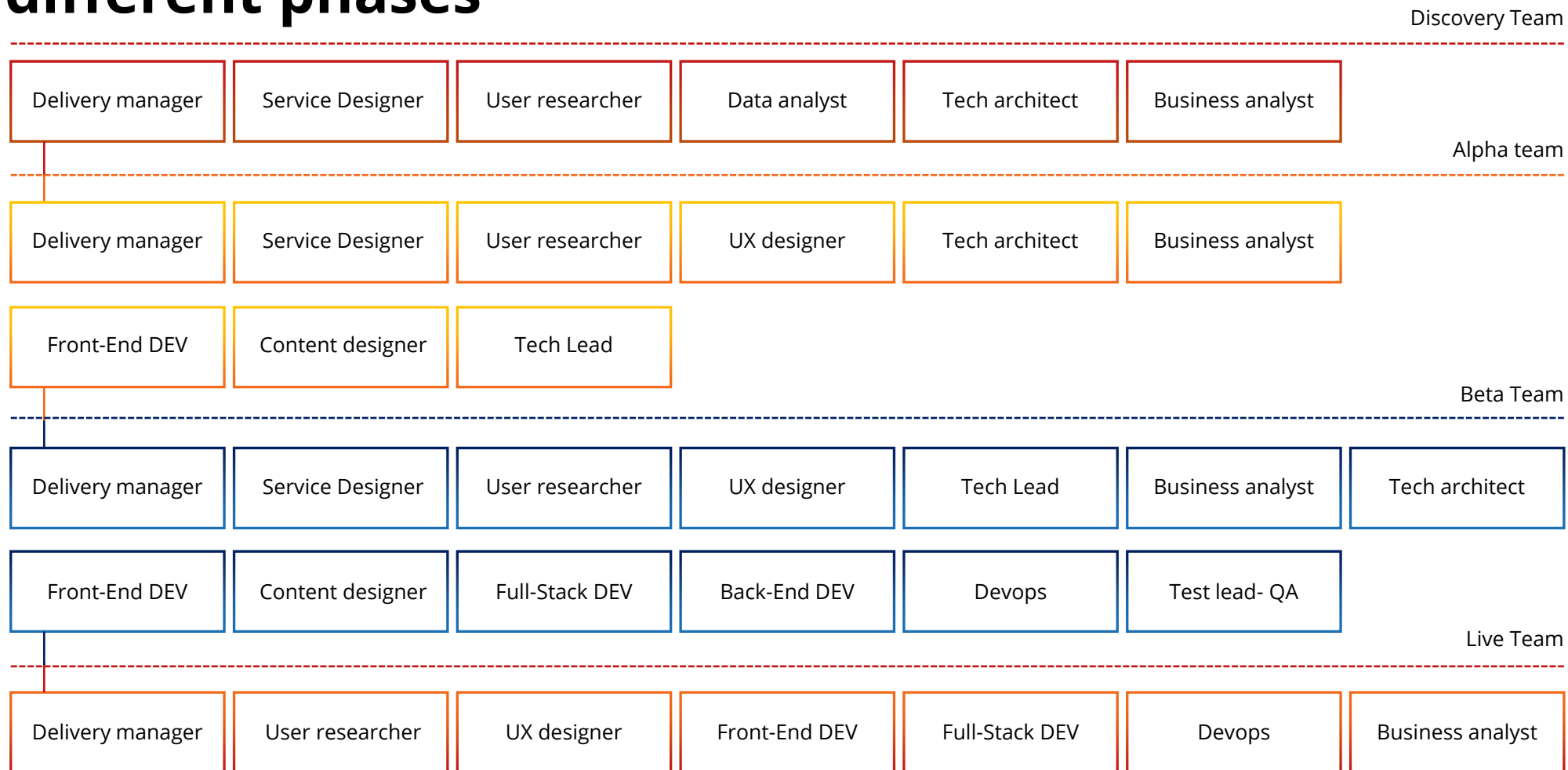
07

Delivery focused

08

Managing team  
dynamics

# We adopt scalable approach to programme management & delivery, adapting teams to different phases







# WHY TRANSFORM



A person with long blonde hair is wearing a black shirt and a lei with pink and yellow flowers. They are holding a yellow pen over a spiral notebook. The background is blurred, showing an indoor setting with a white wall and a blue object.

**Dramatic digital change  
starts with optimistic,  
analog thinking.**

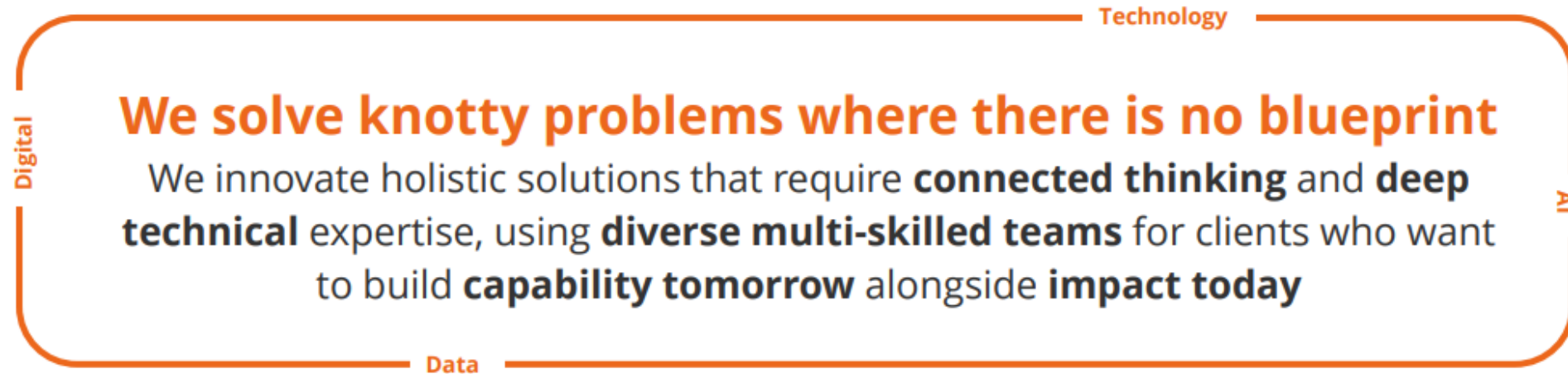
# We're a technology & data consultancy.

We **define**, **design**, **build** and **operate** products and experiences that drive real change.





# What gets us out of bed in the morning...



**Connected thinking :** We look at complex issues from end to end and through multiple lenses – we see the whole picture and consider the system not the symptom.

**Partnership scale :** We are able to field teams across disciplines without the scale, cost or disappointment that comes with the big guys

**Collaboration unleashed :** Multi-functional teams fielded with agility and adaptability, without the P&L structures that kill collaboration for our competitors

**Deep Tech & Data Expertise:** We have a depth of expertise across a spectrum of technologies; the expert in the room, with real world experience across multiple connected domains.

# We can help:

## 01 — Optimise

### Effectiveness & efficiency

Unlock the potential of your people, processes, tech and data to create new value, drive down costs, or both.

## 02 — Accelerate

### Run faster

Create capacity for speed-to-impact and build your capabilities so you're ready for anything.

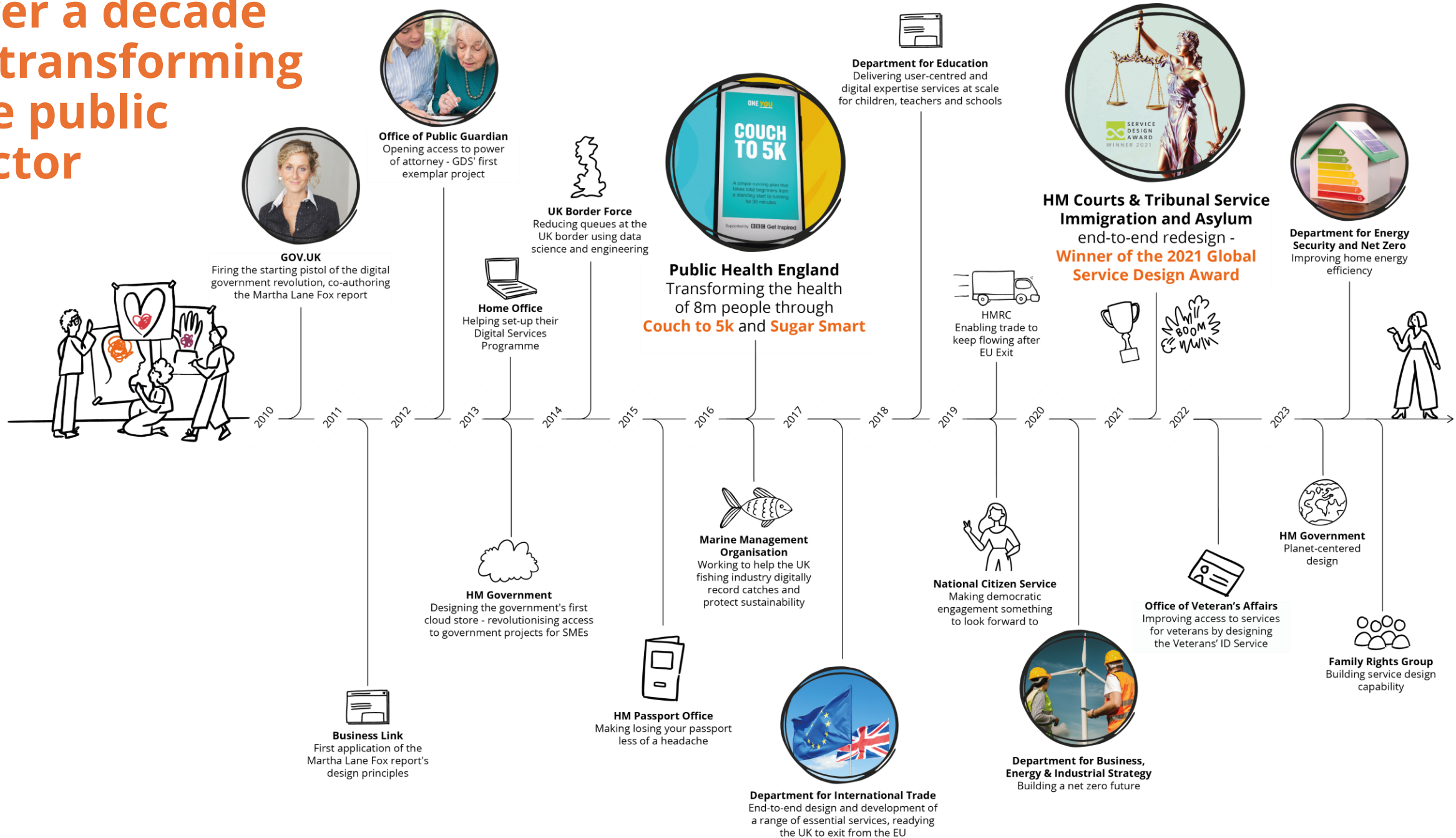
## 03 — Transform

### Unlock opportunity

Define and deliver real change through digital, data and technology solutions for people.



# Over a decade of transforming the public sector



# Tackling tough challenges is our idea of fun



We wrote the report for Martha Lane-Fox that triggered the digital revolution in government



We took Argos from pencils to digital – and from 12% to 47%+ digital participation



We're trusted to provide critical infrastructure to handle Brexit, including for HMRC, DIT and DEFRA



We designed and developed Couch-to-5k for Public Health England



We're democratising access to Justice in the UK by digitising the courts system



We delivered the world's first national online gambling self-exclusion service



We're the only UK company to win a 2021 Global Service Design Award



We've delivered over 50 government digital services, working with 18 departments and agencies



We developed machine learning algorithms to predict academic attendance, car purchase intent... and pizza orders!



We're DFE's engineering partner, creating a data-driven future for educators and students nationally



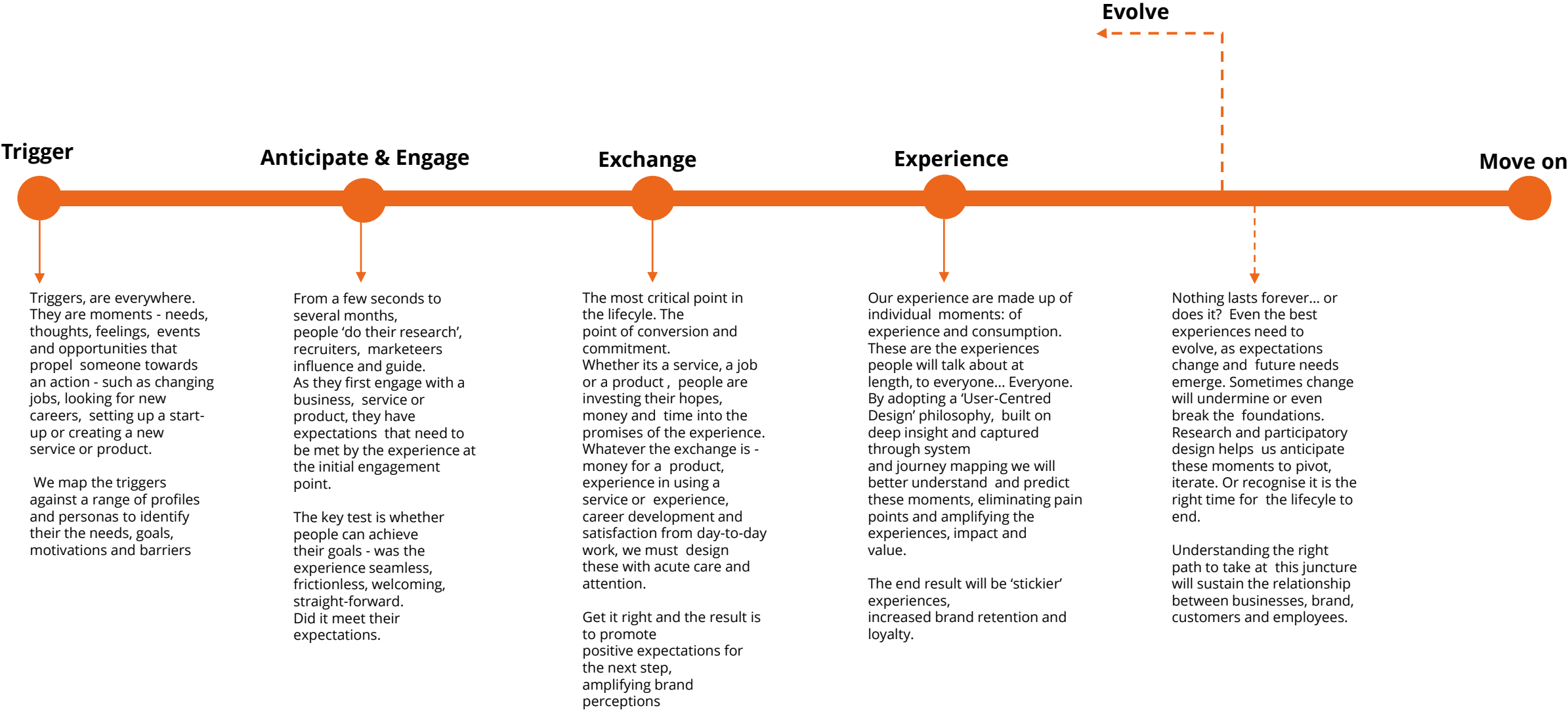
Moving from selling cars to mobility solutions



# We'll curate a multi-disciplinary team to solve your toughest challenges:

Data & Analytics	Research & Service Design	Strategy & Innovation	Technology	Change & Delivery
Digital Analytics	Customer & User Research – Quant and Qual	Growth and Innovation Strategy	Technology Strategy and Platform Selection	Project and Programme Delivery
CRM	CX and Service Design	Agile strategy - goal setting & outcome definition	Solutions and Technology Architecture	Product and Delivery Management
Data Science and Predictive Modelling	User Experience Design	Digital & Data Strategy - communication, commerce and channel-shift	Software Engineering	Business Analysis
Measurement Frameworks	Content Design	Digital Analytics	DevOps & Quality Engineering	Agile Transformation
	Behavioural Science		Data Engineering	

# We Design for the whole service Lifecycle



# How we work



## No cookie cutters

We're contextual, customer-centered & agile as a gymnastics team



## We make your teams better

We're big on knowledge transfer, co-working & trusted partnerships



## We're data evangelists

It all starts with research, data, analytics & empathy



## Quality is a big deal

With the toughest accreditations to prove it



## All about the impact

We're commercial, goal-driven and focused on driving real change



## Culture & people matter

Experienced, empowered, nice people with diverse perspectives

# Transparency and Collaboration are at the heart of what we do

We are open and experienced in working in multidisciplinary teams alongside clients, partners (and competitors) as a single high functioning “rainbow” team aligned around a shared vision and common goals.

## Culture of Collaboration:

**Shared objectives** – aligning teams from different disciplines or organisations around a common goal, shared vision and desired outcome

**Empowerment & openness** – to deliver outcomes, not outputs, we believe multi-functional teams need to be appropriately empowered within the framework of the delivery, with a healthy level of friction to challenge assumptions and innovate brave solutions

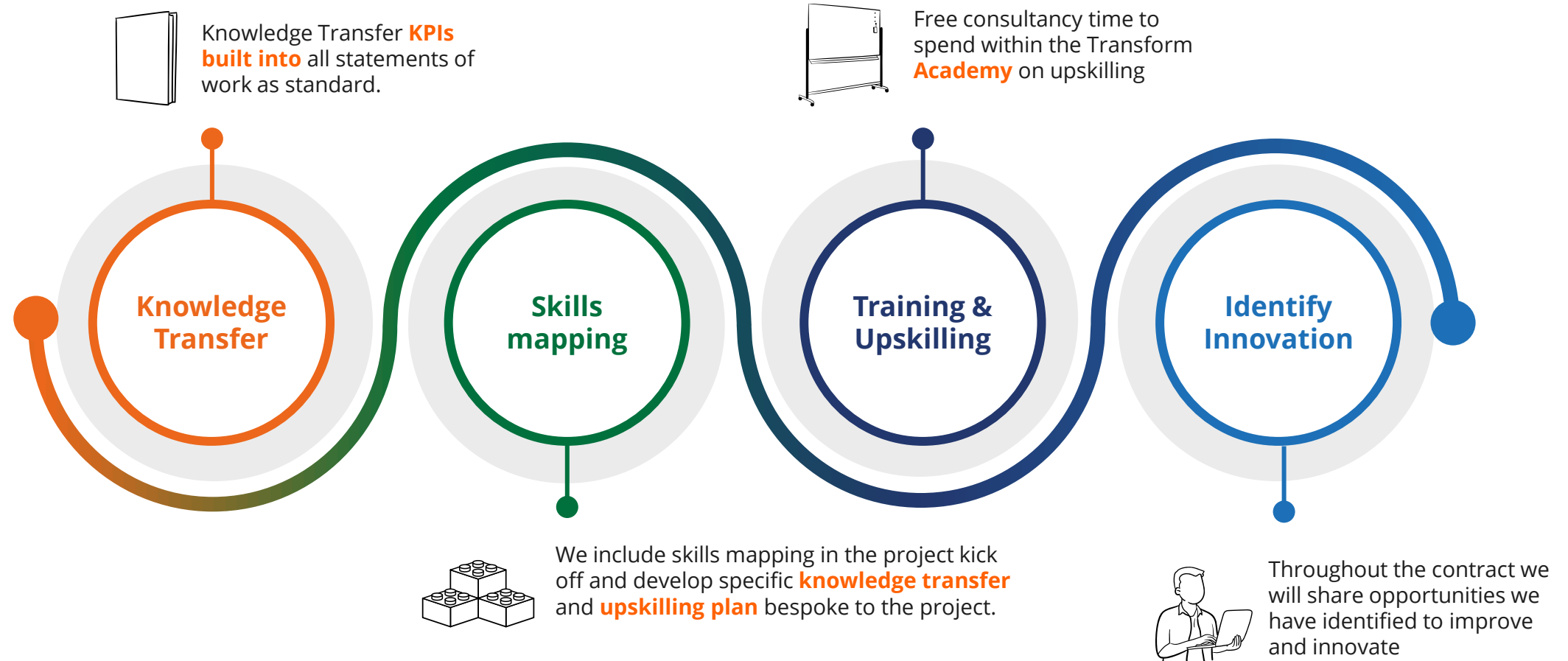
**Curiosity & respect** – the power of diverse teams is unlocking potential above and beyond the individual's contribution. We foster a culture that encourages curiosity and insists on respect

Whilst upholding required levels of professionalism, we like to inject fun and apply creative approaches to team-building and problem solving including Manuals-of-me, Lego serious play and Team Charters to create a strong working culture quickly. We provide shared space (physical and digital) for collaboration, adapting to the client's preferred approaches and tools.



# We strive for continuous improvement & innovation

We will focus on helping our clients and their people develop, innovate and advance



# Inclusion matters to us

Transform believes a diverse culture **underpins** delivery of the best outcomes for our **clients**, our **team** and our **community**

**Our mission is to be representative of population, diverse of thought, inclusive of all**

- Active Social Impact programme
- Inclusion Council and Peer Networks
- KPIs from executive level, cascaded into objectives & operations



**We won the Management Today award for **Best DE&I Programme** 2022**

**And our CEO, Emma Robertson won Management Today's award for **Best CEO Leadership on DE&I** 2023**



# SERVICE PARAMETERS

# Service Parameters

## Information Assurance

Transform has designed and implemented systems up to and including IL3. We have ISO9001 (Quality Management) and ISO27001 (Information Security). We have a large number of staff with security clearance.

## Backup / Restore D.R.

Transform can provide full back-up and disaster recovery functionality for the development work, should the client so require. We can either provide this via hosting partners or via cloud services. All development servers and code are imaged typically every hour and secured to remote location. Periodically we take physical back-ups and can either store these through one of our existing contracts or using the client's preferred supplier.

## On and Offboarding

Transform provides a seamless process for engaging clients and transferring knowledge. Our development process includes an initial 'Sprint 0', to mobilise the project team, develop agreed ways of working and clearly define the project outcomes. Our preferred model is to co-locate with the client and work collaboratively. In addition, we will provide documented System Architecture documents that outline the logical and physical characteristics of the systems we develop

## Pricing

We have provided a completed SFIA Rate Card with this G-Cloud submission

## Service Management

The management of our services is typically managed under a separate contract. However, the operating characteristics, alerting and instrumentation are key considerations in the development of any platform. Our central aspect of our approach is to consider these requirements in the system design and in line with best practice, provide a System Architecture document that supports the acceptance into service process.



# Service Parameters

## Service Constraints

Transform will normally be developing services and solutions specific to client requirements and specifications. Therefore, we normally work within the client's constraints

## Service Levels

Transform will normally be building specific client solutions to their specifications and therefore we normally work to agree service levels defined as part of the development of the platform

## Financial Recompense

See service levels

## Training

Transform offers a comprehensive training and coaching approach, as part of all engagements. This covers formal training courses, to mentoring and informal coaching to build internal capability. This is separately agreed with the customer, depending on need and available budgets.

All clients also have access to our Transform Academy sharing expertise for free via ½ day training workshops.

## Ordering & Invoicing Process

See Terms & Conditions

# Service Parameters

Termination Terms	Data Restoration & Migration	Customer Responsibilities	Technical Requirements	Trial Services Available
<ul style="list-style-type: none"><li>By consumers (i.e. consumption): N/A</li><li>By the Supplier (removal of the G-Cloud Service): as per terms and conditions</li></ul>	Transform will normally be developing services and solutions specific to client requirements and specifications. Therefore, we will agree the scope and specification of any data migration and restoration SLAs/processes as part of the work package	N/A	Transform will normally be building specific client solutions to their specifications and therefore we define the technical platform requirements as part of the development of the platform	Our preferred approach is to build solutions from prototypes to end solutions and use extensive customer / consumer input. We do not offer off-the shelf trial solutions and normally build to the clients' requirements