Transform

Designing for the edges to benefit the whole

How we can unite data, AI and design to build comprehensive services where no one falls through the cracks

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1. FROM DIGITAL DIVIDE TO THE AI ABYSS

As the digital age makes way for the AI age, the pace of transformation continues to accelerate – delivering real commercial and community value benefits the increasingly sophisticated models, smarter services, and more efficient operations.

And yet, alongside this progress, a significant group of people remain underserved, with advancing technologies widening rather than narrowing the gap. As a result, what was once a Digital Divide is now threatening to become an AI Abyss.

Research shows a substantial minority across the UK lack the access, skills, or money to engage with digital and data services. Their experienced vulnerability, hardship, or instability isn't a temporary anomaly but a structural reality of modern society. In the UK alone, the economic benefit of closing the digital divide is estimated at over £13.6 billion.

However, we've gotten used to creating design patterns and service blueprints that anchor to the majority experience – why invest time in "designing for the exceptions" when there are too many variants to cater for?

The thing is, designing services that fail to see exceptions clearly doesn't make them disappear — it simply shifts cost, risk and, most worryingly, harm downstream. Systems designed around an assumed "average" user are not neutral but harmful.

When marginalised customers & citizens fall through the cracks:

- Costs rise through late intervention, escalation and avoidable crisis
- Regulatory exposure increases as duties of care are missed
- Trust erodes; not just among those affected, but across surrounding communities and the wider society

Inverting the 80/20:

The challenge is not a lack of care or will – far from it, leaders are motivated to deliver inclusive, far-reaching services. However, the traditional framework for transformation rewards service blueprints that cater to the-many, applying the 80:20 rule to reach an MVP that delivers the best outcome for the greatest number of users, in the most efficient way.

What would happen if we inverted the 80:20 and designed not from the centre out but the edges in? What if designing for the majority doesn't reach the edge-cases, but designing from the edges does meet the majority?

Design once, design well, design for all.

This paper sets out why we should approach design this way and proposes a different model of transformation. It's one that brings data, AI, and design together to create inclusive, accessible services that work from the edges in.

2. THE BUSINESS REALITY

Why this is so hard

Despite widespread intent to build more inclusive, preventative, and human services, progress is slow. This isn't because organisations don't care, but because three systemic blockers sit underneath even the best intentions.

Blocker 1: We can't see the edges clearly

Signals of vulnerability and hardship already exist, appearing in arrears data, missed appointments, repeat contacts, behavioural patterns and frontline notes. But these signals are rarely brought together into a single customer view to be analysed and actioned.

Instead, sensitive data remains fragmented across systems and teams, and understandable concerns around privacy, consent and misuse often leads to under-use of data rather than responsible use. As a result, insight remains partial and delayed.

The consequence is predictable:

- Early warning signs are missed
- Intervention happens late, when harm has already escalated
- Services default to crisis response rather than prevention

The issue here is not technology. It is visibility.

NAPAC
The National Association for People Abused in Childhood

For the National Association for People Abused in Childhood (NAPAC), expanding the support they provided for the survivors of abuse hinged on a streamlined data system.

Transform recognised that a centralised dashboard with better analytical detail and the visibility needed to support NAPAC's advocacy could signal a key turning point for the organisation.

Now, with more efficient data processing and reporting, NAPAC have more time and resource dedicated to helping partners like the MOJ and policing improve abuse prevention and survivor support.

"Understandable concerns around privacy, consent and misuse often leads to under-use of data rather than responsible use."

Blocker 2: We need to work harder at setting the conditions to design with people

The principle of co-designing with marginalised groups isn't new but despite being widely accepted, it often remains difficult to achieve in practice.

Design often involves people in the design process, but quite often falls short of authentic, collaborative design – partly because collaboration doesn't look the same for everyone.

Cultural, operational and relational barriers get in the way. Participation requires time, trust and psychological safety, all of which are hard to create within delivery-focused programmes. Procurement cycles, policy timelines and performance metrics often work against meaningful engagement, while leadership anxiety about exposing historic service issues or sharing design influence with non-staff participants can further limit how open and participatory design can be.

As a result:

- Engagement happens late, once key decisions are already made
- Participation becomes tokenistic, shallow or extractive
- Lived experience is treated as insight, but not as influence

At Transform, we believe transformation must be holistic, human and equitable. Our approach to design seeks to identify needs earlier and craft better experiences and outcomes *with* the people who use and deliver services day-to-day.

The UK government's Public Design Evidence Review (PDER), a comprehensive report with expert insights on the value of design within the public sector, features our work with the HM Courts and Tribunals Service (HMCTS), emphasising best practice that helps designing into the edges of systems and enables the following outcomes:

- Increased legitimacy through iterative design and testing
- De-risked delivery by challenging assumptions
- Inspiration and innovation through diversified views
- Insight by understanding experiences across a system
- Collaboration by bringing people together as a foundation of change

"At Transform, we believe transformation must be holistic, human and equitable."

Office for Veterans' Affairs

For the Office of Veterans Affairs (OVA) solving complex challenges along the way meant understanding the human context alongside the complex technical and data security challenges that would serve Veterans, while satisfying the security priorities of the MOD.

Since 2018, veterans leaving the armed forces have been provided with a physical card that entitled them to discounts and support services but there was a need for a new digital service that would extend this to all living veterans.

To ensure veterans were meaningfully involved in the design process, we used a mixed-method, veteran-centred approach focused on accessibility and lived experience. We recruited and interviewed around 25 veterans with varying levels of digital confidence and access, enabling participation regardless of location, mobility, or health constraints. These interviews explored veterans' experiences, challenges, and unmet needs.

Several veterans were then invited to take part in follow-up co-design sessions, where they directly shaped ideas and design decisions of the digital card.

To validate our findings at scale, we reached over 800 veterans through an online survey. This was made possible through trusted partnerships with veteran charities, who shared the survey within their networks and encouraged participation, helping ensure veterans' voices were widely heard and represented.

By really understanding veterans' needs, we, at Transform, were able to design the future service vision, end-to-end blueprint and a technical and data solution that would deliver the digital-first service.

But the culture of inclusivity and accessibility should *start from within*, as our work with the BBC proves. Through a human-centred, whole-system approach including user interviews and journey mapping, we enabled an environment where everyone, regardless of their abilities, felt valued and contributed in a meaningful way. It also fostered a culture where digital accessibility isn't an afterthought, but a guiding principle for their journey towards diversity, equality, and inclusion.

Blocker 3: Transformation is happening in pieces

Investment in AI without data readiness is a sunk cost that will amplify bias and negatively impact users. The real differentiator is whether systems are built with the product-led rigor to see the 'edges'. However, readiness is nothing without integrity and efficiency. We must move beyond data extraction and toward ethical, sustainable analytics management. Hoarding 'junk data' with analytical systems that lack accountability to understand ethics, governance and accessibility *limit* the power of the new opportunities AI presents. It's not just a governance failure; it's a sustainability crisis. Every gigabyte of irrelevant data stored and processed increases carbon footprint and dilutes AI's performance.

To lead in an AI-driven economy, organisations must transcend "service-level" fixes and embrace Systems-Level Continuous Improvement.

AI should be used as a diagnostic engine to stress-test organisational logic, ensuring systems are not just functional, but resilient. This evolution is fuelled by a shift from passive data collection to Ethical Orchestration. We are moving the goalposts from legacy product metrics to Human-Centred Measurement.

How do we start to translate edge cases to measurement?

A truly human-centred program must account for the edge cases. Measurement frameworks often default to majority data, creating "algorithmic shadows" where minority users are underserved or misrepresented.

Any strategy must prioritise:

- Proactive inclusion: designing metrics that specifically track outcomes for non-majority groups
- Algorithmic auditing: ensuring that system-level improvements do not come at the cost of equity or accessibility

HM Revenue & Customs

Real impact happens when solutions cut across systems and departments, using analytics to connect data, technology, and user need. Transform's work with HM Revenue and Customs (HMRC) after EU Exit is a strong example.

Faced with complex, high volume parcel movement data, we applied analytics and AI to surface patterns, improve predictability, and make search results more relevant and timelier. This enabled users from businesses to operational teams to find the right information faster, reducing friction and uncertainty at scale. The outcome demonstrated how analytics driven search can serve diverse users more effectively by turning large datasets into clear, actionable insight.

Is there still work to do to understand how we can continually improve the system for edge cases - 100%, but what we have is a product feature that has cross system application.

3. A DIFFERENT MODEL

Human-centred transformation for the edges

So, what if vulnerability was no longer treated as a specialist concern?

What if transformation started not with the assumed "average" customer, but with *those at the edges* — and designed inwards from there?

A human-centred model of transformation recognises that designing for the most complex, constrained and marginalised users creates better systems for everyone. Services become clearer and more compassionate by default.

This approach brings together three ideas:

1. **Holistic and human:** recognising people as whole individuals, not collections of data points or transactions.
2. **Seeing, not just predicting:** using data and AI to illuminate patterns of need, while preserving human judgment and dignity.
3. **Early, compassionate action:** enabling timely, human-in-the-loop intervention before crisis occurs.

This is not about building parallel services for users at risk of vulnerability. It's about *reshaping* transformation so that it can see and respond to the full spectrum of human experience.

4. THE THREE CONDITIONS
for making this real

Making human-centred transformation work goes beyond tools or intent. As we see it, there are three foundational conditions that enable organisations to move from fragmented effort to meaningful impact.

1. Translation

Lack of data is very rarely a challenge for organisations. It usually already exists alongside signals of need but is often difficult to interpret because it's isolated or dispersed across departments; only a piece of the puzzle and not the full picture.

This translation exercise turns siloed and sensitive data into segmented, meaningful and actionable customer intelligence.

This involves:

- Bringing together multiple signals to form a clearer picture of lived circumstances
- Using analytics to surface patterns of risk, resilience and change over time
- Translating insight into forms that frontline teams and service designers can actually use

Done well, translation allows organisations to see people more clearly — not as abstract risk scores, but as individuals whose needs and trajectories can be *understood and responded* to early and with care.

NHS
Health Education England

Health Education England unlocked oracular powers by using data effectively to predict course dissatisfaction, allowing them to intervene with support before junior doctors could attrite.

Through qualitative research, data handling of millions of records and effective Large Language Model training, Transform created a scalable platform with over 60% accuracy.

2. Trust

Insight without trust is fragile.

And trust can only be built through inclusive, participatory design that creates confidence, representation and long-term relationships *with* the people services are intended to support.

This means:

- Designing with, not just for, marginalised groups
- Creating psychologically safe spaces for participation, particularly where trauma or power imbalance exists
- Treating lived experience as expertise, not anecdote

Trust enables better data, better design and better, empathetic decisions. It reduces resistance, improves engagement and ensures that transformation reflects real human experience rather than organisational assumptions.

HM Courts & Tribunals Service

The Immigration and Asylum Tribunal, for example, helps people appeal against decisions made by the Home Office denying them the 'right to remain'. These are often people who speak little English and have very low trust in government. For them, the process of appeals was slow, frustrating and expensive.

By shifting the focus to these users – through empathetic storytelling, intensive discovery with user communities and a community of practice made up of the people who this service would matter to most– we reimagined the service, showing the true impact of designing *with*.

3. Technology

Technology plays a critical role — but shouldn't be viewed as a standalone solution.

The goal isn't always to replace existing platforms, but to integrate them and layer in new capabilities, including AI, to deliver a coherent and personalised experience.

This includes:

- Connecting CRMs, case management systems and operational platforms
- Embedding analytics and AI where they support judgment and action
- Designing human-in-the-loop processes by default

When technology is integrated with translation and trust, it becomes an enabler of orchestration — aligning insight, design and delivery around the needs of people at the edges.

UK Health Security Agency

Together, these three conditions create the foundations for human-centred transformation that is ethical, effective and sustainable, as evidenced by the UK Health Security Agency.

In 2020, the Prime Minister set out plans for a major reform of England's public health system. That meant big changes for the core institutions delivering public health—and big shift in how critical clinical systems, data and services were managed.

The Health Improvement Services Transition (HIST) Programme required essential patient data, systems and services be moved from Public Health England (PHE) into their rightful organisational homes—like DHSC, NHSE, and NHS Digital. Transform understood that this was complex, sensitive, and absolutely key to reshaping how public health works across the UK.

5. Making it actionable

How organisations start

For many leaders, the challenge isn't in whether to act, but where to begin.

Because human-centred transformation doesn't require a single, large-scale programme and also isn't a one-size-fits-all solution, but instead focusses on deliberate, ethical and sustainable momentum, it can be tricky to kick off. Realistically, organisations will be in different phases, depending on their maturity, constraints and ambition.

The next page highlights common starting points to launch you into the cycle of insight to action and the steps needed to create meaningful change at the edges.

Clarifying the problem

Transformation without clear goals leads to ineffective and inefficient products that are more often creation for creation's sake and less about impactful changes. Real progress begins with sharp problem definition.

Instead of framing challenges in terms of systems or channels, **organisations must start by asking:**

- Who is currently falling through the cracks?
- Where does harm, cost or escalation show up repeatedly?
- What outcomes matter most for people at the edges?

Why it's a necessary step: This reframing helps align teams around real human impact, not just delivery metrics.

Focused discovery

Really solving for the edges means understanding the human context alongside the complexities of policy or strategic goals. Intense and targeted discovery encourages shared understanding before solutions are designed.

This often includes:

- Listening to lived experience
- Engaging frontline teams
- Mapping journeys where failure demand concentrates

Why it's a necessary step: Done well, discovery builds empathy and evidence in equal measure — grounding decisions in reality rather than assumption.

Data foundations

Not all organisations need advanced AI to start seeing the edges more clearly - especially not when data can be a powerful driver for meaningful change. It helps to think of your data as fuel; your engine, no matter how well designed, will not run without it.

Assessing data maturity helps you understand:

- What signals of vulnerability already exist
- Where data is fragmented or inaccessible
- What governance and trust foundations are in place

Why it's a necessary step: This creates a realistic baseline for responsible progress, spotlighting the gaps that need bridging.

Design and AI sprints

Short, focused sprints allow organisations to test new ways of working without committing to full-scale change that would require time and budget. Instead, cultivating a culture of failing fast and iterating successes would be more effective.

These sprints may explore:

- How analytics can surface early warning signals
- How design can translate insight into human action
- Where human-in-the-loop decision-making adds the most value

Why it's a necessary step: Learning quickly — and safely — is often more valuable than building perfectly.

Capability building

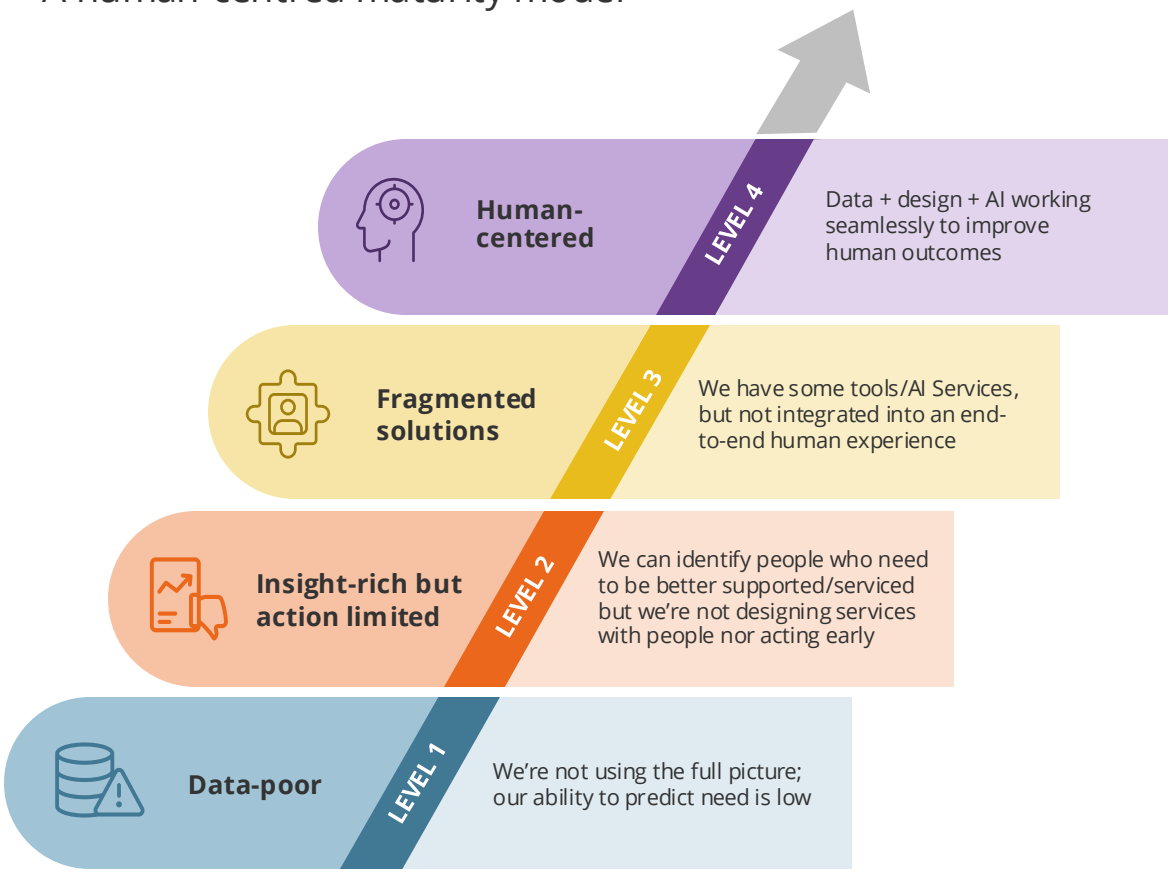
Sustainable change depends on people, not just programmes. Building capability not only instils a culture of human-first ways of working but also creates an environment where your people do not get left behind.

Capability building may include:

- Developing confidence in ethical data and AI use
- Embedding inclusive and trauma-informed design skills
- Creating shared language between data, design and operational teams

Why it's a necessary step: Over time, this shifts transformation from something organisations do occasionally, to something they are able to do consistently.

6. What good looks like:
A human-centred maturity model



Determining where you're *going* starts with knowing where you *are*. Acknowledging your AS-IS will allow you to meaningfully progress from intent to impact by identify the next most valuable step forward.

Most organisations sit somewhere between the first three levels - our human-centred maturity model provides the diagnostic lens needed to help determine your current operating reality.

LEVEL 1
Data-poor

"We're not seeing the full picture; our ability to predict need is low."

Organisations rely heavily on reactive signals. Data is limited, fragmented or difficult to access, particularly where sensitivity is involved. Insight is often anecdotal, and frontline teams depend on individual experience rather than shared intelligence.

Common characteristics:

- Limited visibility of emerging need or risk
- Heavy reliance on crisis response
- Decisions driven by single data sources or lagging indicators

Progression from this level is less about advanced technology, and more about establishing basic visibility and confidence in data use.

LEVEL 2
Insight-rich but action-limited

"We can identify people who need to be better supported or serviced, but we're not designing services with people, nor acting early."

Organisations have begun to develop meaningful insight. Data analysis highlights patterns of vulnerability, repeat demand or service failure. Dashboards, reports and risk indicators exist, and teams can point to where problems are occurring. However, insight remains separated from action.

Common characteristics:

- Analytics and reporting that inform strategy, but not day-to-day decisions
- Limited ability to intervene early or prevent escalation
- Service design that happens without deep or sustained participation from affected groups
- Frontline teams aware of issues, but constrained by process, policy or risk aversion

Organisations at Level 2 often know what is happening, but struggle with how to respond in a timely, human and coordinated way. The gap at this level is not data or intent — it is the absence of mechanisms that translate insight into compassionate action.

Progression requires connecting insight to service design and operational practice, and beginning to create the conditions for trust, participation and early intervention.

LEVEL 3
Fragmented solutions

"We have tools, AI and redesigned services — but not integrated into a coherent end-to-end human experience."

Organisations have clearly invested in change. Analytics capabilities exist. AI pilots are underway. Some services or journeys have been redesigned with better intent. However, these efforts operate in pockets rather than as a system.

Common characteristics:
- Multiple tools and platforms addressing different parts of the problem
- AI and analytics producing insight that is not consistently acted on
- Service redesign happening in isolation from data and operational reality
- Customers experiencing inconsistency as they move across channels and teams

Organisations at Level 3 often feel busy and innovative yet struggle to demonstrate sustained improvement in human outcomes — particularly for people with complex or overlapping needs. The core limitation is not ambition or capability, but lack of orchestration.

Progress beyond this level requires shifting focus from individual initiatives to how data, design and technology work together to support coherent, human experiences.

LEVEL 4
Human-centred operating model

"Data, design and AI working seamlessly to improve human outcomes."

This aspirational state represents a move away from transformation as a series of projects, and towards a genuinely human-centred operating model.

Common characteristics:
- Data is translated into meaningful, actionable insight across the organisation
- Services are designed with people, embedding lived experience into decision-making
- Technology integrates existing platforms and layers in AI to support — not replace — human judgment
- Early, compassionate intervention becomes the norm rather than the exception

Importantly, this is not about perfection or complete automation. Human-centred organisations retain people firmly in the loop, using AI and analytics to enhance visibility, consistency and care.

Reaching this level does not happen in a single leap. It is built incrementally through trust, capability and coherence over time.

What distinguishes Level 4 organisations is not the sophistication of their tools, but their ability to orchestrate insight, design and delivery around real human needs — especially at the edges.

Want to unlock Level 4? We can help. Transform works with organisations across the UK to deliver human-centred, data-driven transformation that creates better outcomes for people and communities.

Let's build an inclusive, accessible and impactful future together. Reach out.

Transform