

Transforming retrofit - together

A toolkit for nurturing
collaboration

TRANSFORM-ER
● ● ● ● ● ● ● ● ● ● ● ●
TRANSFORM • ENGAGE • RETROFIT



Contents

03	Foreword	28	Phase 3: Navigating challenges - together
04	Our culture change framework	29	Phase 3 tools: Collaboration support to navigate challenges
08	Our culture change programme	30	Tool #8: Space for feedback and constructive dialogue
10	Phase 1: Awareness and engagement	31	Tool #9: Informal gatherings for building trust and resolving issues
11	Phase 1 tools: Building the foundations of collaboration	33	Tool #10: Act don't react - staying grounded when stakes are high
12	Tool #1: 5 dysfunctions of a team - Patrick Lencioni	35	Tool #11: Non-Violent Communication (NVC) for tough conversations
13	Tool #2: The power of collaboration case studies	38	Phase 4: Sustaining collaboration - together
16	Tool #3: Rewiring retrofit - the retrofit collaboration game	39	Phase 4 tools: Nurturing collaboration as an ongoing process
18	Phase 2: Collaboration kick off	40	Tool #12: Storytelling to shift the narrative
19	Phase 2 tools: Setting the team up for successful collaboration	42	Tool #13: Celebrate
20	Tool #4: Common vision and values mapping	44	Conclusion: Let's transform retrofit - together
22	Tool #5: Radical Candor - Kim Scott	45	Appendix 1: Collaboration case studies
24	Tool #6: Collaboration framework at operational level	51	Appendix 2: Rewiring Retrofit cards
26	Tool #7: Personality tests		

With thanks to the organisations and people behind the tools referenced in this toolkit. We have included links to more information and resources where appropriate.

You can navigate this document by clicking on these page titles - making it easier to get to the section you want!



Foreword

Collaboration must be at the heart of the retrofit revolution

Retrofitting at scale requires fundamental cultural change, not just technical or financial solutions. When multiple organisations deliver complex projects under pressure, collaborative working becomes essential for success.

Our decade of experience catalysing UK retrofit-at-scale shows this repeatedly: technical solutions fail without strong partnerships, financial models collapse when organisations can't align interests, and projects stall without trust and shared purpose.

Transform-ER: nurturing collaboration at scale

This shaped our approach creating Transform.Engage.Retrofit (Transform-ER) – an Innovate UK funded project to enable a retrofit sector that can deliver one million home energy upgrades every year by 2030.

Bringing together 13 industry leaders, it's launching a Community Interest Company (CIC) to help social landlords to deliver high-quality, cost-effective retrofit programmes at scale.

At its core, Transform-ER uses alliancing – a partnering approach where organisations share risks, rewards, and decision-making to drive down costs and improve delivery certainty. This requires more than contractual agreements; it demands cultural change that builds trust, aligns values, and sustains cooperation throughout complex projects.

Let's transform retrofit - together

Our framework and toolkit support this cultural transformation within retrofit project teams, helping them navigate complexity, build trust, and adopt collaborative mindsets.

The toolkit has two parts: first, our collaboration framework which highlights core components of our approach; second, a four-phase culture change approach from initial alignment through to ongoing cooperation.

Each phase offers practical tools for key challenges. It doesn't aim to replace technical expertise or project management, but addresses the human dynamics underpinning successful delivery. These tools help teams resolve issues early, develop stronger communication habits, and maintain shared purpose.

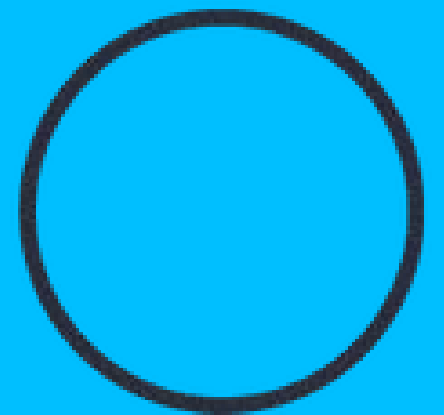
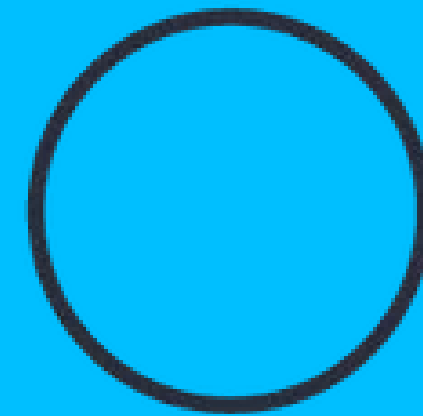
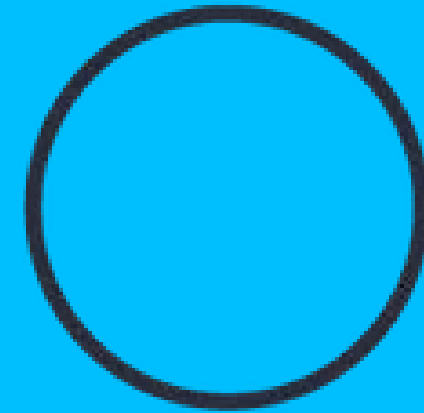
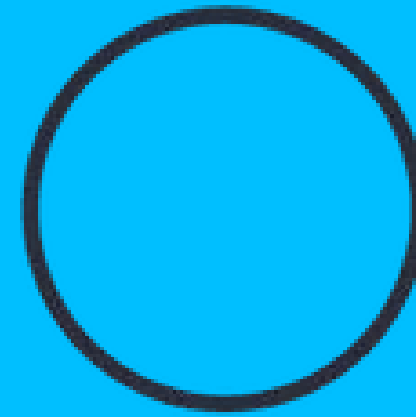
We're implementing this toolkit in Transform-ER and encourage others to test these tools, accelerating industry-wide collaborative culture while meeting urgent net-zero goals.

Stéphanie Ah Tchou, Culture change lead at Energiesprong UK



Our culture change framework

What we mean by collaboration - and
why it's essential for retrofit-at-scale



Our culture change framework

What do we mean by collaboration?

When we talk about collaboration, we mean the act of working together with a shared objective. The goal of this section is to understand the different levels and elements that need to happen simultaneously for collaboration work to truly emerge. It is always changing and an ongoing dynamic.

This report considers the approach of researchers Anne and Patrick Beauvillard, from the Institut des Territoires Coopératifs and how their findings can be applied in retrofit.¹

The French institute is a laboratory for research on cooperative processes, and a resource-centre serving individuals, organisations and territories. Its aim is to help foster cooperative maturity and make cooperation a lever for development, resilience, and innovation.

It identifies four key areas for achieving effective collaboration:

1. Consider the implicit
2. Integrate three dimensions: personal, collective, and territorial
3. Capture recursion (iteration) as sources of emergence, self-organisation and development
4. Access 'human comprehension'

What do we mean by explicit or implicit aspects of collaboration?

The explicit aspects of collaboration are the tools and best practices that we use. Yet while they are key, they are not enough. We also need to consider the implicit aspects in the process too.

This is what Anne and Patrick Beauvillard dubbed the 'human comprehension' – in other words, the values, beliefs, motivations and skills of the people involved at all levels of a collaborative endeavour.²



¹ It is important to note that these authors use the term 'co-operation' in their work. However, we've chosen to use the term 'collaboration' in this project as it is the industry standard term. Even if the terminology employed differ, in this context the meaning behind both words is similar: 'working together with a shared objective'.

² Beauvillard, Conf'échanges InsTerCoop – Décembre 2019 " La coopération, levier de résilience et de développement".

What are the three levels of collaboration?

The three levels identified by the authors are:

- the territorial level: in the context of a retrofit project, this is the neighbourhood, the area where it takes place
- the collective level: this is where collaboration is considered at organisational level
- the individual level: this level looks at the stakeholders as individuals, beyond the role they play in their organisation. Often overlooked, this level is however crucial for collaboration.³

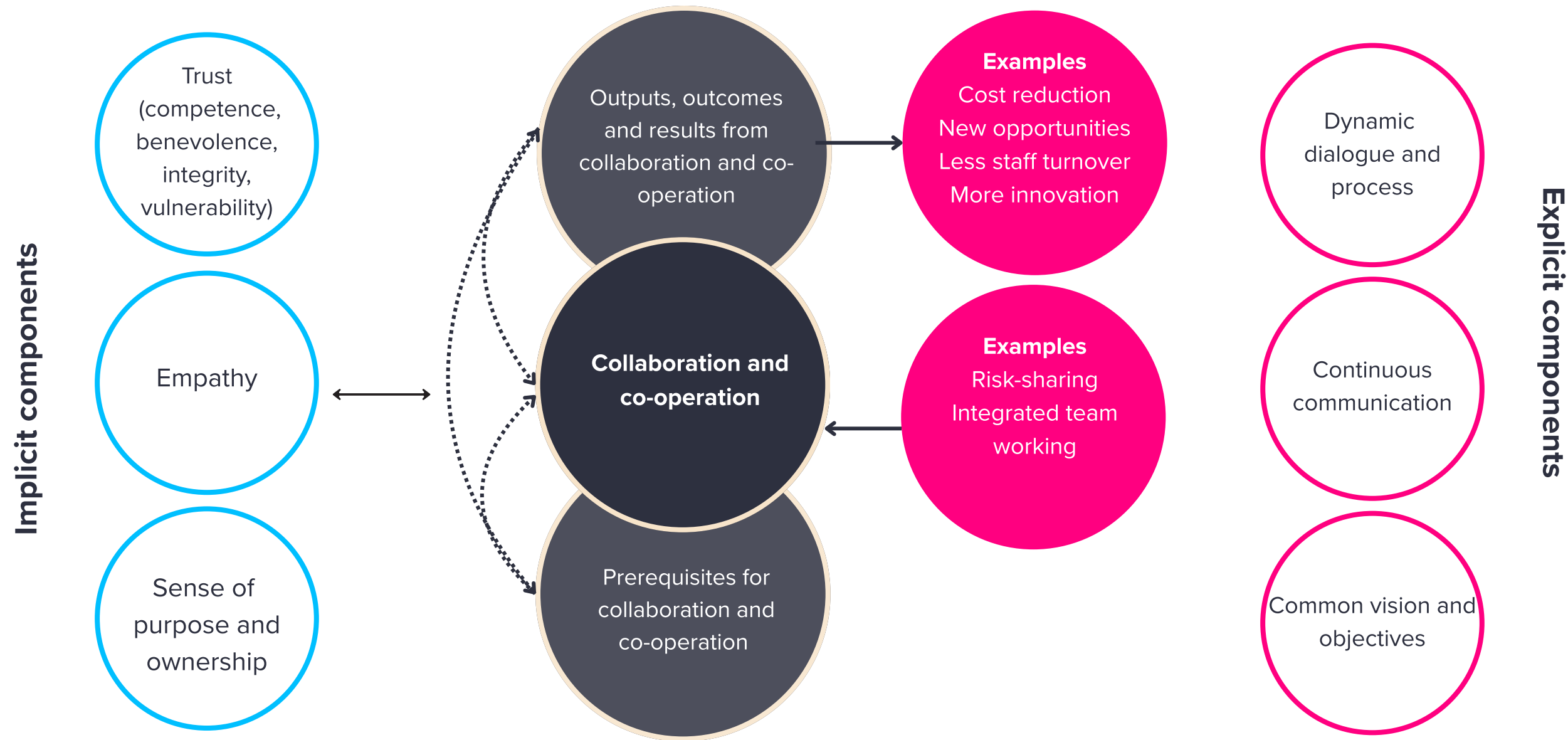
These three levels are interconnected, the collective transforms the individuals, the individuals transform the collective, and the territory influences the behaviours while being shaped by the collectives and individuals.

³ Institut des Coopératifs - <https://instercoop.fr/portfolio-item/instercoop/>

Dimension	Explicit	Implicit
Territorial	Do all the homes of the same block agree to a retrofit? What are the reasons and the consequences?	Are there specific beliefs on how houses should look in this area?
Collective	Are there regular progress meetings between the stakeholders of a retrofit project and who are the organisations present?	What are the common beliefs around the level of competency and trustworthiness of a specific type of organisation (e.g.: housing organisation, main contractor etc.)?
Individual	How often and how (email, phone, face-to-face meeting etc.) do the team members communicate with each other?	How do individuals perceive the level of empathy and trustworthiness of their Resident Liaison Officer or other facilitator?

Examples of questions and elements to consider in the context of retrofit.





What are the components of collaboration?

This graphic is a simplified representation of the components of collaboration.⁴ Collaboration is a very dynamic and interdependent process with all its components constantly moving and in interaction with one another; this is the lens through which the graphic below should be viewed. This process is happening at the territorial, collective and individual levels simultaneously.

⁴ These findings come from the works of authors such as S. Sitkin, M. Adam, J. Barney and M. Dicks and case studies such as Heathrow Terminal 5 (K. Carter, A. Mukhtar, Partnering Heathrow Terminal 5, <https://www.irbnet.de/daten/iconda/CIB17591.pdf>) and Project 13 (A. Reed-Gibbs, Project 13 Early Adopter case study: SMP Alliance, <https://www.project13.info/news/project-13-early-adopter-case-study-smp-alliance-r65/>)

Our culture change programme

Creating the conditions for
collaboration to thrive



Transform-ER's culture change programme

Let's transform retrofit - together

Real collaboration doesn't happen by accident—it's built with intention, commitment, and trust.

This culture change programme helps you shape conditions where collaboration can take root and grow, even in complex, fast-paced retrofit projects.

It provides practical guidance on influencing collaboration's key components and creating environments where shared goals - not individual silos - drive progress.

However, culture change cannot succeed in isolation. For collaboration to become the norm, it needs real commitment from individuals, teams, and organisations.

This means investing time, resources, and energy throughout every project's lifecycle, not just at the start.

Like Maslow's hierarchy of needs, where safety enables growth, effective collaboration depends on psychological safety and trust.

Without these, cooperation remains surface-level and short-lived. With them, we replace blame with shared ownership and fragmentation with alignment.

This reflects the CIC and Transform-ER partnering approach: embedding a repeatable, resilient model of working together that delivers better outcomes for everyone.

How the programme works

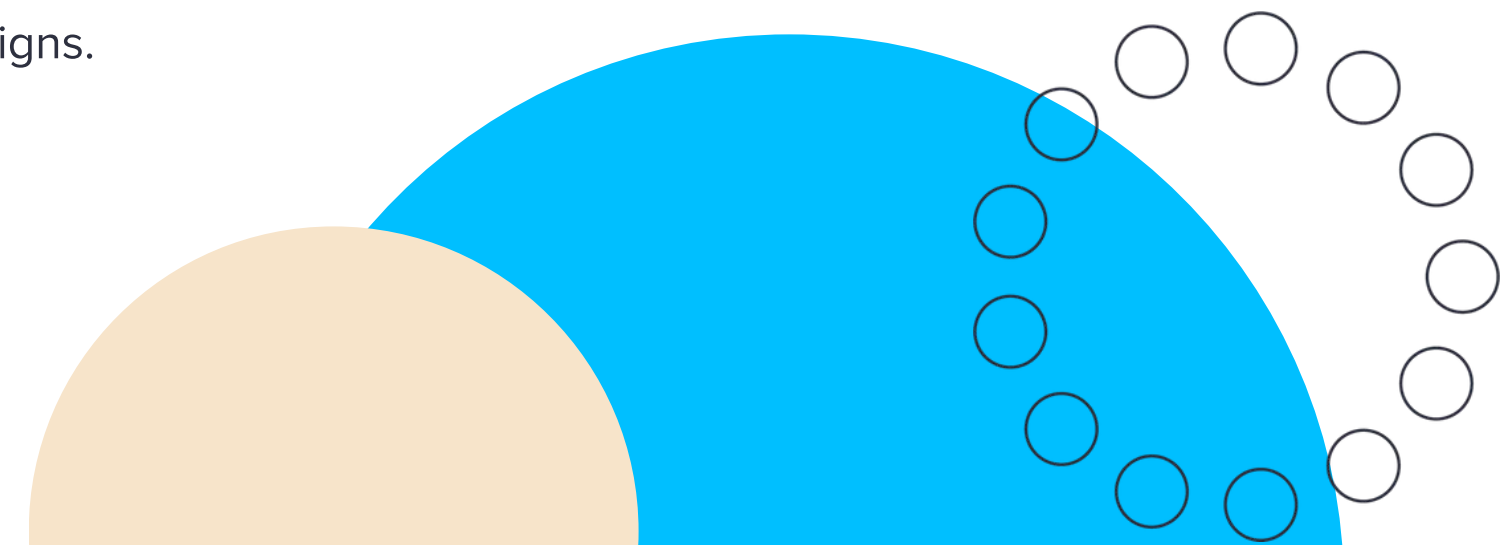
The programme comprises four phases, each with practical tools, methods, and workshop designs.

While individual tools and case studies can be used independently, the overall culture change process only works when embedded in sustained organisational effort with active participation across all roles and levels.

These tools are designed to plant seeds. For seeds to take root, the soil must be fertile - shaped by partnering or alliance model safety and structure - and nurtured consistently over time. Only then can collaboration's benefits grow and be sustained.

Each tool includes its objective, method, and suggested format. While usable individually, they're most impactful when integrated into a wider programme.

Join us and let's transform retrofit - together!



Phase 1: Awareness and engagement

From the start, it's crucial to ensure that everyone, from executives to operational team members, understands the value and demands of a collaborative mindset. This phase sets the stage, ensuring key players are aligned on expectations and committed to shared goals and a truly collaborative process.

What are the objectives?

- Engage future team members across the various organisations involved in the retrofit project
- Ensure leaders understand the implications of a collaborative approach, including time and resource investment
- Establish a shared understanding of the unique integrated collaborative approach and prepare the team for this way of working.

Who needs to be involved?

- At least one executive leader and one operational leader per organisation.

When should this happen?

- At the start of the project concept, before the signing of the contract
- At the same time as the partnering/alliancing approach is explained to the stakeholders who are interested in the project.

Why? The outcomes

- Executives and operational team members recognise that collaboration is central to the success of the retrofit project, which requires a new mindset and commitment
- Leadership commits the necessary resources to support a collaborative working environment.



Phase 1 tools: Building the foundations of collaboration

Tool #1: 5 dysfunctions of a team - Patrick Lencioni

Lencioni's model is widely used to diagnose team dysfunctions and (re)build a strong collaborative team. In the culture change context, it is a great tool to present the different elements of a strong collaborative team and introduce key concepts such as trust, vulnerability and healthy conflict, without which there can be no sustainable collaboration.

Tool #2: The power of collaboration case studies

Case studies that provide concrete examples of effective collaboration in action help new teams gain insights into best practices for collaboration, communication, trust-building, and decision-making. These case studies also help teams visualise the impact of collaboration, making abstract concepts more tangible and relatable. They foster a sense of possibility, showing that with the right approach, achieving high performance and collaboration can go hand in hand.

Tool #3: Rewiring retrofit - the retrofit collaboration game

This card-based workshop helps participants uncover the root causes of failure in traditional retrofit delivery and understand why a collaborative alliancing or partnering approach is essential. By mapping real project challenges to consequences, and testing collaborative solutions, teams see clearly how this model addresses their concerns. It's a powerful tool for alignment before contract signing, helping everyone commit to the shared path ahead.



Tool #1: 5 dysfunctions of a team - Patrick Lencioni

Why use it?

Lencioni's model diagnoses team dysfunctions and builds collaborative foundations. It introduces essential concepts like trust, vulnerability, and healthy conflict that could help underpin sustainable collaboration in retrofit projects.

What is it?

A pyramid framework identifying five barriers to effective teamwork and their corresponding solutions:

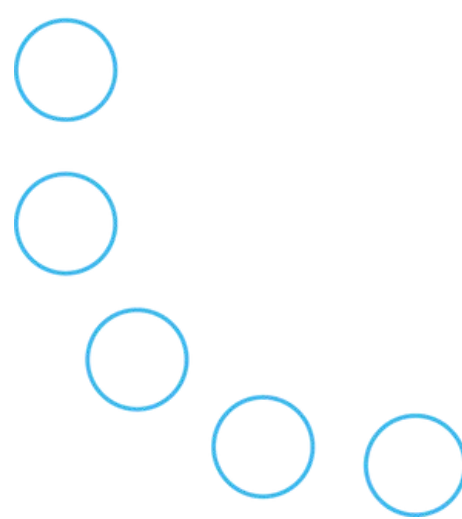
- **Trust:** The foundation where team members feel secure being open, admitting mistakes, and seeking help without fear of criticism. This vulnerability-based trust allows focus on work rather than self-protection
- **Healthy conflict:** Constructive debate that addresses disagreements early and prevents larger issues. Avoiding difficult conversations creates superficial harmony while tensions build underneath
- **Commitment:** Genuine support for decisions once made, achieved through clarity and buy-in. Team members need to feel heard in the process, even when their preferred solution isn't chosen
- **Accountability:** Holding each other to agreed standards and commitments. Peer accountability reduces need for formal oversight and demonstrates respect for colleagues' ability to improve.

- **Focus on results:** Collective attention to measurable outcomes over individual egos or status. Results include both financial performance and strategic milestones that guide long-term success.

How to use it?

- **Workshop introduction:** Present the model and have team members reflect on each component from their own experience
- **Follow-up assessment:** Organise sessions every few months to identify the weakest areas and track collaboration improvements.

[Find out more](#)



Tool #2: The power of collaboration case studies

Why use it?

Real-life case studies provide concrete examples of effective collaboration in action. They help teams visualise collaboration's impact, making abstract concepts tangible and demonstrating how overcoming obstacles collaboratively leads to success.

What is it?

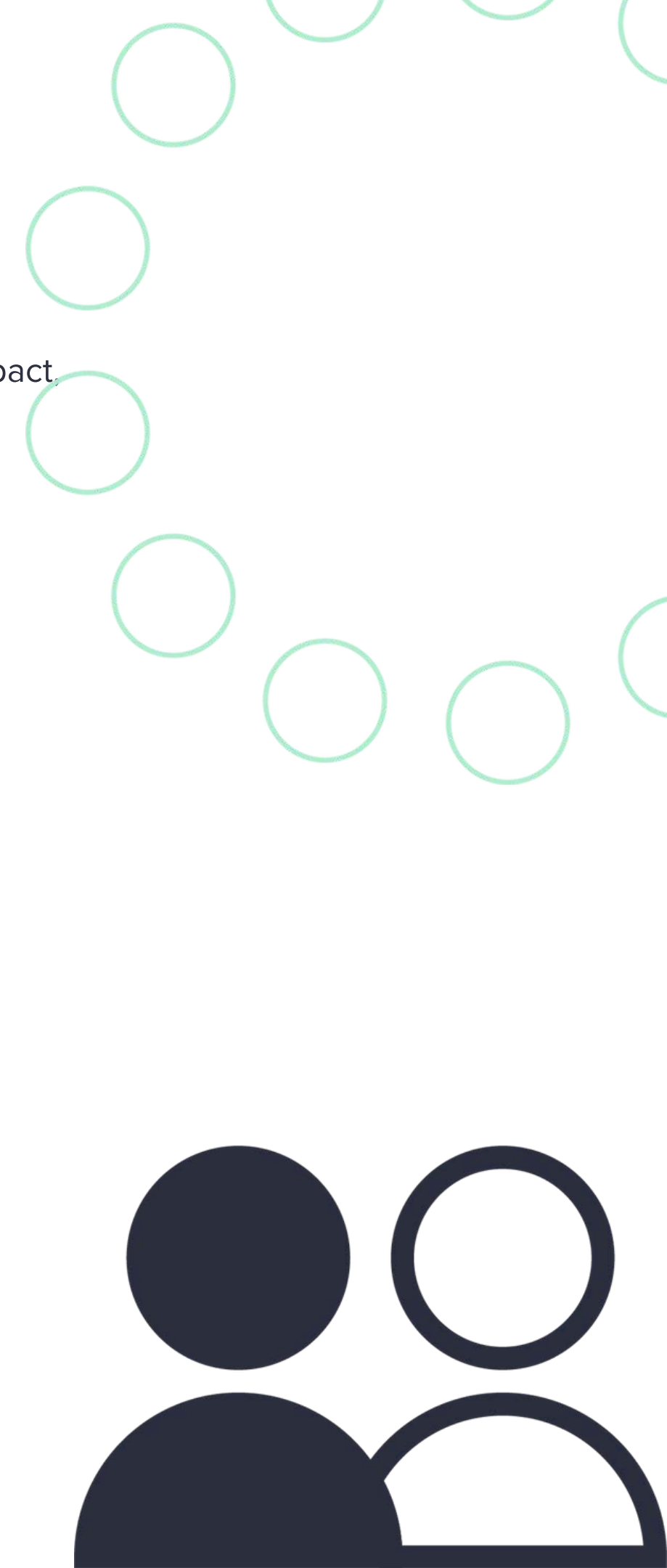
Case study one: Heathrow T5

The Heathrow T5 project was a programme with 18 projects, and 147 sub-projects which ranged from £2m budget to £300m. It included 50,000 people working towards a common goal, from 20,000 companies. Based on statistics, the previsions for the Heathrow project were that it would open one year late, be a billion overspent, kill two people and seriously injure 400 others. By pushing collaboration and partnering to a new level, the £4.3bn project was completed on time, and on budget.

Key collaboration elements:

- Integrated Project Delivery (IPD) contract based on trust and collaborative problem-solving
- Risk allocation: British Airport Authority (BAA) held most risk, creating space for innovation and performance
- Shared incentives: Contractors rewarded for under-budget completion, safety, and quality
- Cultural shift: "Declared future state" approach freed minds from past limitations
- Leadership commitment: BAA stopped unsafe work, demonstrating safety over production

Results: Zero fatalities, on-time delivery, budget adherence.



Case study two: Learning from contrasting retrofit experiences

Collaboration creates shared vision, builds trust, and aligns all parties - from contractors to residents - toward common goals. In deep retrofit projects, this collaborative spirit determines success or failure. These two contrasting case studies reveal key lessons about culture change and collaboration. Please note: these are based on real projects but have been anonymised.

Case study A: Successful, long-standing regional housing partnership

Context: The housing provider and principal contractor had an existing 15-year strategic partnership focused on upgrading post-war housing stock, including large-scale refurbishments, thermal upgrades, fire safety improvements, and enhancements to public spaces. They had also jointly invested in local employment and youth skills development as part of a broader regeneration agenda.

- Success factors:
 - Dedicated Resident Liaison Officers (RLOs) engaged tenants early
 - Transparent cost-reimbursement contract with open-book accounting
 - Trust-based problem-solving approach.

Case study B: A large-scale urban retrofit initiative

Context: This project was part of an urban retrofit programme designed to test whole-house retrofit solutions across a diverse and ageing housing stock. The initiative was built on the premise of pipeline visibility: participating housing providers committed to a programme of retrofit work, offering contractors long-term certainty in exchange for investment in skills, innovation, and supply chains. The intention was to move from fragmented delivery to a collaborative model where both costs and lessons could be shared.

- Challenges:
 - Delayed, limited contractor involvement
 - Transactional contractual relationships
 - Closed information sharing leading to mistrust and cost increases.

Find out more

Key lessons

1. *Trust and communication are the foundation for successful collaboration*

- Case study A: Open-book accounting and clear communication enabled transparent relationships and collaborative challenge resolution
- Case study B: Limited transparency and weak communication excluded stakeholders, creating suspicion and reactive problem-solving
- Lessons: Trust reduces misunderstandings; transparent communication ensures alignment; shared information enables proactive solutions; transparency prevents delays and cost overruns.

2. *Early stakeholder involvement sets the stage for collaboration*

- Case study A: Early contractor engagement allowed design input, compliance guidance, and risk identification, creating shared accountability
- Case study B: Late contractor involvement created fragmented team culture and disconnection from decisions.
- Lessons: Early involvement ensures goal alignment; enables risk identification before issues become critical; fosters shared responsibility; fragmented teams cannot effectively collaborate.

3. *Collaborative contracts drive shared success*

- Case study A: Cost-reimbursement model with shared risk enabled honest conversations and solution-focused teams
- Case study B: Rigid, risk-averse contracts prioritised self-protection over collaboration
- Lessons: Shared risk/reward models align stakeholder interests; rigid models hinder flexibility and innovation; aligned incentives motivate collective challenge resolution.

4. *Resident engagement is critical*

- Case study A: Integrated resident engagement through RLOs ensured two-way communication and smoother delivery
- Case study B: Minimal resident involvement led to alienation, resistance, and project-impacting conflicts
- Lessons: Early, continuous engagement builds trust and ownership; proper involvement reduces resistance and improves outcomes; resident satisfaction is integral to timeline and quality success.

How to use it?

- **Workshop discussions:** Present case studies to illustrate collaboration principles in action
- **Team reflection:** Have teams identify which case study elements apply to their current projects
- **Problem-solving reference:** Use lessons to address specific collaboration challenges as they arise.

Tool #3: Rewiring retrofit - the retrofit collaboration game

Why use it?

Our retrofit collaboration game has been developed as part of the Transform-ER project. It supports teams before they commit to Transform-ER CIC alliancing/partnering contracts. These contracts shift from "business as usual" to shared risk, collective governance, and transparency – so the tool is designed to:

- build understanding and alignment around the foundational shift that alliancing represents
- help participants develop a shared view of current problems, future possibilities, and why this approach matters
- strengthen commitment by rooting it in lived experience - participants don't just sign a contract, they enter it aware of what they're leaving behind and moving toward.

What is it?

A 90-minute participatory workshop inspired by [Climate Fresk](#), using 29 cards in three categories. Download the cards in a printable format.

Main issues (3 cards): Starting point representing core delivery problems

- Delays; Additional costs; Poor performance.

Causes (16 cards): Root causes of delivery issues

- Lack of anticipation, data and resources on the client's side; Technical offer still limited in certain areas; Fragmented, underdeveloped supply chain; Lack of coordination between trades; Cumbersome and sometimes contradictory administrative rules; Access or logistics challenges on construction sites; Lack of visibility on scale or upcoming projects; Tenants and leaseholders challenges; Inaccurate or incomplete site instructions; Unreliable technical data/ existing surveys; Skills and labour shortages; Uncertain, insufficient or poorly adapted funding; Dependence on weather or availability of materials; Value leakage; Lack of risk management: technical issues or unforeseen circumstances; Types of contract.



CIC features (10 cards): Solutions the partnering model provides

- Alliance based/ Partnering contract; Supply chain availability and reliability; Collaboration mindset; Disintermediation; Risk management; Enabling finance; Enabling scale; Collective governance; Reliable data; Transparency.

How to use it?

- Workshop structure: 90 minutes
- Groups: 3-5 people per group, one facilitator each
- Materials: Card set, A0 white sheet, coloured pens, post-its

Session flow

1. Scene setting (5 min)

- Frame as opportunity to understand why this new approach exists and how it solves familiar problems.

2. Present main issues (5 min)

- Place 3 main issue cards on sheet as foundation.

3. Map causes (15 min)

- Participants link "Causes" cards to the three main issues
- Add any missing causes they identify.

4. Connect solutions (20 min)

- Link "CIC Features" cards to "Causes" cards
- Discuss how CIC features solve/influence causes
- Add any missing desirable features.

5. Reflect on impact (15 min)

- Participants identify:
 - How features differ from current working experience
 - Which features would most impact their work.

6. Group synthesis (15 min)

- Each group shares their "Rewired Retrofit maps" and key insights.

7. Closing perspective (15 min)

- Reflect on model as response to mapped challenges
- Discuss: "What makes this model not just new—but necessary?"
- Explore commitment: "What are we signing onto culturally, not just legally?"

Find the cards for printing



Phase 2: Collaboration kick-off

This phase is about building alignment, defining values, and getting everyone on board behind a co-created shared vision. A clear operational framework and a commitment to collaborative principles from the outset will save time, resources, and help prevent conflicts.

What are the objectives?

- Co-create a shared vision for the project, aligned with common values and behaviours
- Define collaboration frameworks for day-to-day operations, ensuring everyone understands how to effectively communicate and make decisions
- Ensure that the individuals involved in the project possess the collaborative mindset required for this high-stakes retrofit project.

Who needs to be involved?

- At least one executive leader and one operational leader per organisation.

Why? The outcomes

- Executive and operational members of the team have collectively defined a shared vision, values and a “one project mantra” they can rally behind
- The team has defined a clear way of functioning together, based on the values defined
- A charter containing the collectively agreed vision and values is signed by the executives of each member organisation.



Phase 2 tools: Setting the team up for successful collaboration

Tool #4: Common vision and values mapping

A common vision and values mapping exercise is a powerful tool for building collaboration because it aligns team members around shared goals and principles. By engaging in open discussions about what they collectively aspire to achieve and the values that guide their work, teams create a strong foundation for trust and co-operation. Additionally, it fosters a sense of ownership and commitment, as individuals see their input reflected in the team's shared vision. Ultimately, this process strengthens cohesion, making it easier to navigate challenges and work toward a common purpose.

Tool #5: Radical candor – K. Scott

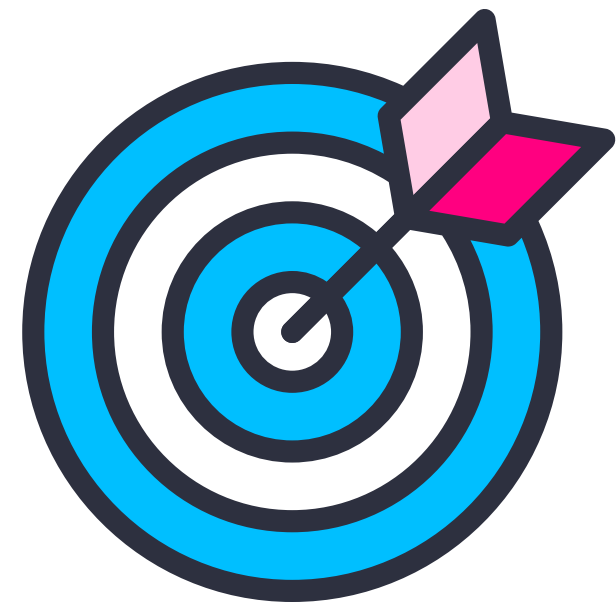
Integrating the “Radical Candor” model into a team collaboration workshop helps create an environment where open and honest communication is both encouraged and valued. The model emphasises the balance between challenging directly and caring personally, enabling teams to communicate in a way that strengthens relationships rather than causing friction, while encouraging team members to speak up.

Tool #6: Collaboration framework at operational level

While this toolkit is mainly focused on the implicit aspects of collaboration, it is also essential to address the explicit aspects too. Clear roles, responsibilities, and decision-making processes are crucial in any complex project. This tool helps define how the team will collaborate on day-to-day tasks and navigate the challenges of retrofit work.

Tool #7: Personality tests

Personality assessments help the team understand each other's strengths and weaknesses, allowing for better communication and coordination of tasks, particularly when working across diverse skill sets in a multidisciplinary environment like retrofit projects. This tool explores and compares 3 models: Insights Discovery, DISC and 16 personalities.



Tool #4: Common vision and values mapping

Why use it?

Establishes shared vision and values fundamental to collaborative culture. Creates clarity, cohesion, and trust from the outset while fostering ownership and commitment. The "one project mantra" serves as an anchor throughout the project, reinforcing shared identity and purpose.

What is it?

A four-phase visual mapping exercise that moves teams from current state to shared commitment:

Phase 1: Map current situation

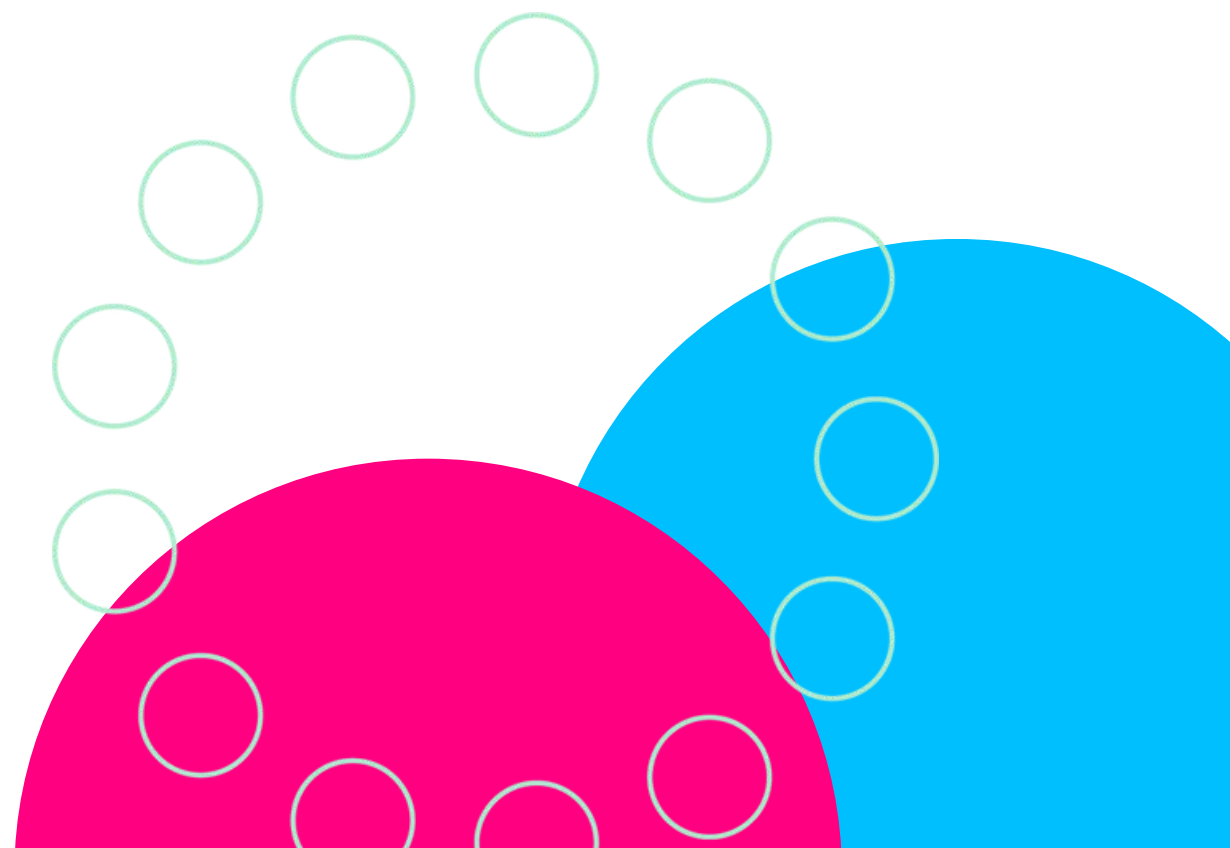
- Visual drawing exercise where team members collectively define project's current status, challenges, and strengths
- Creates shared understanding and identifies potential obstacles early.

Phase 2: Define desired future state

- Team visually draws where they want to be at project end or a key milestone
- Placed alongside current state drawing to show clear journey from present to future.

Phase 3: Agree on values, behaviours and a shared project mantra

Establish core values with concrete underpinning behaviours for daily interactions. See overleaf for an example values framework from the FUSION project.



- Fairness: Fair treatment and reward for all parties
- Unity: Single team with common aims, focused on shared objectives
- Seamless: No barriers between team members, collective responsibility
- Initiative: Everyone contributing to best solutions, delegated decision-making
- Openness: Honest communication by every team member
- No Blame: Trusting team judgement, resolving problems without recrimination

You can also create "one project mantra" - a unifying statement that reflects collective purpose - for example:

- "Beyond retrofit - building trust, building futures"
- "Collaboration is the method. Retrofit is the outcome"
- "Our retrofit. Our responsibility. Our result"

Phase 4: Sign project charter

Formalise agreed values, behaviours, vision, and mantra into executive-level signed charter that serves as project reference for future challenge resolution.

How to use it?

- **Timing:** Early project phase, in-person sessions
- **Integration:** Combine with communication tools (Tool #1 or Tool #5) for complete foundation
- **Flexibility:** Can be delivered across multiple sessions if values discussions need deeper exploration
- **Reference:** Charter becomes living document for resolving future challenges in line with agreed values.



Energiesprong UK's
Stéphanie Ah Tchou
leading Transform-ER's
value mapping workshop.

Tool #5: Radical Candor – Kim Scott

Why use it?

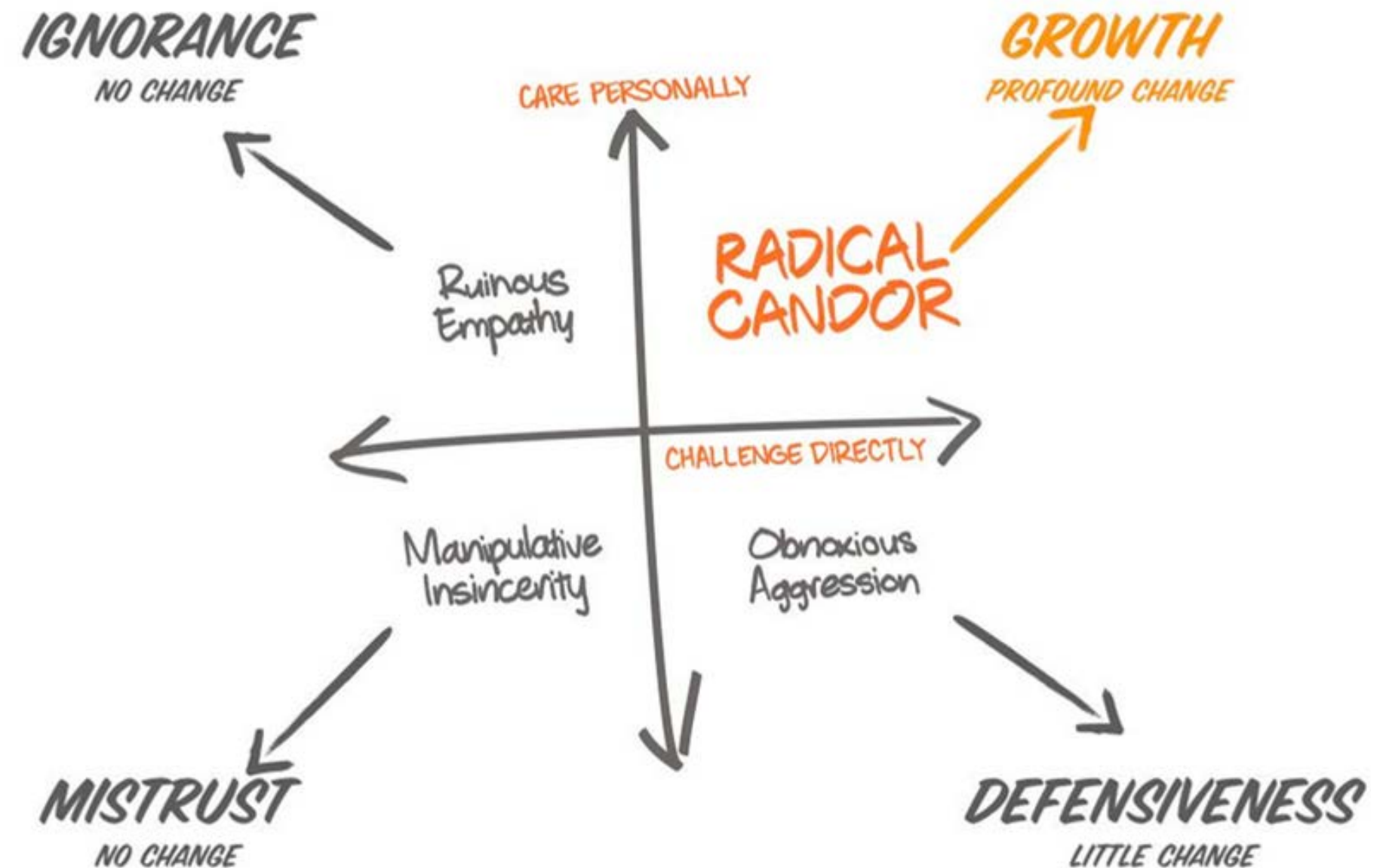
Creates an environment where open, honest communication strengthens relationships rather than causing friction. Helps teams foster trust, enhance collaboration through constructive challenge, strengthen accountability, prevent hidden tensions, and encourage continuous growth where feedback becomes opportunity rather than attack.

What is it?

Kim Scott's communication model based on two key principles:

- **Caring Personally:** Genuine concern for coworkers as individuals, building relationships based on trust, empathy, and respect. Communication given with positive intent rather than criticism
- **Challenging Directly:** Clear, candid, constructive feedback that helps the project and individuals. Addressing issues honestly rather than avoiding difficult conversations, ensuring feedback is actionable.

When both are present, you have “Radical Candor” - a communication style that promotes growth, accountability, and mutual respect.



The Radical Candor matrix (credit: Kim Scott).

But when dimensions are missing, you end up with:

- Ruinous Empathy (high care, low challenge) - Softening or avoiding feedback to spare feelings leads to resentment and unaddressed issues that grow bigger
- Obnoxious Aggression (low care, high challenge) - Overly blunt feedback without consideration creates defensiveness and damages relationships
- Manipulative Insincerity (low care, low challenge) - Insincere, passive-aggressive, or absent communication erodes trust and leaves problems unresolved

How to use it?

Best introduced alongside tools like Vision and Values Mapping (#4) to establish constructive, respectful communication that increases trust and psychological safety, strengthening overall collaboration.

Find out more



Tool #6: Collaboration framework at operational level

Why use it?

While this toolkit is mainly focused on the implicit aspects of collaboration, it is also essential to address the explicit aspects too, such as the practical side of collaboration at implementation level. It also contributes to one of the key elements of collaboration which is clarity.

Rather than a tool per se, it is a space to commonly agree on how the collaboration will work practically and, for example, what IT tools will be used within the team. The objective is to clarify the role of each member of the team, the processes, the tools that are commonly used and other matters like the need for internal training for instance.

It is assumed that issues like governance, decision-making procedures, conflict resolutions and intellectual properties are dealt with via the contractual framework, and therefore are not addressed here.

What is it?

At the beginning of the project, it is important to clearly define the operational framework for collaboration, it includes (and is not limited to):

- **Roles and responsibilities** of each member of the team in the different organisations and a clear contacts list
- **Workflow** between the different members of the team
- **Meetings:** define the different types of meetings, their objectives, frequency and who should attend which.



- **In-person events:** agree at the beginning on the needs for in-person events, their objectives and take into account the availability of each member for such events
- **IT tools:** collectively agree which IT tools will be used for the team, for the storage of information, meetings etc
- **Common office:** agree if the team can have a common physical office, where they can work together, regardless of their organisation of origins. Consider if a virtual office could be a solution
- **Define the need** for internal training within each organisation for all staff that will work on the project, and the possibility to jointly develop and implement it.

How to use it?

- This can be facilitated by the overall project manager/coordinator if such a figure is planned in the alliancing/partnering contractual framework. Otherwise, the client might take this role of facilitating
- The topics described above have to be addressed at the beginning of the project, and can be adapted later on to better fit the project workflow.



Tool #7: Personality tests

Why use it?

Personality assessments improve team collaboration, communication, and decision-making in multidisciplinary teams working under pressure. They're valuable at project start for creating balanced teams and with established teams to diagnose tension and improve dynamics.

What is it?

Several models can be used for this purpose, each with specific advantages and limitations. Three of them are compared below. They all have individual personality tests report and team dynamics. See next page for the model comparison overview and links to more information.

How to use it?

Full implementation

- Use certified facilitators for comprehensive assessments
- Conduct detailed team mapping and development sessions
- Integrate into ongoing team development programs

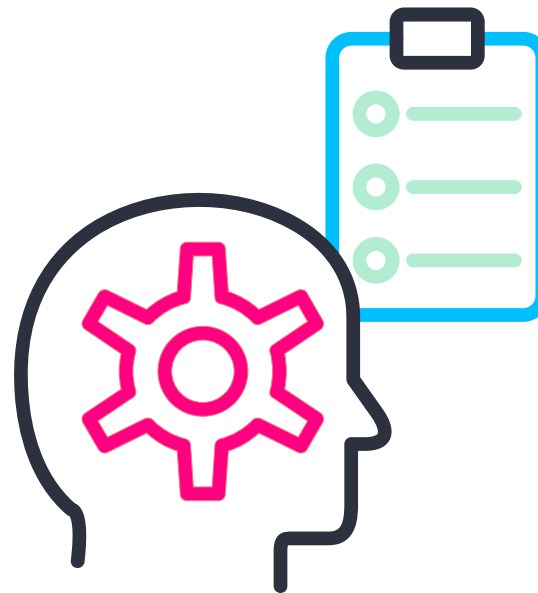
Light-touch approach (low cost/no budget)

1. *Workshop introduction:* Present model basics, invite self-reflection
2. *Free online tests:* Use 16 Personalities free assessment
3. *Team mapping:* Explore distribution and working implications
4. *Practical exercises:* Practice adapting communication styles

Key facilitation questions

- Which type(s) do you identify with?
- How do others experience your communication style?
- What environment helps you feel collaborative?
- What's challenging when working with different types?

Note: Even basic awareness of personality differences can significantly improve team dynamics without formal assessments.



Aspect	<u>Insights Discovery</u>	<u>DISC</u>	<u>16 Personality Types (MBTI-based)</u>
Origins	Carl Jung’s psychological types	William Marston’s DISC theory (1928)	Based on Carl Jung’s theory, developed by Isabel Briggs Myers & Katharine Briggs
Core Dimensions	4 colour energies: Red (action-oriented) Yellow (sociable, creative) Green (supportive) Blue (analytical)	4 types: Dominance Influence Steadiness Conscientiousness	4 dichotomies: Extraversion/Introversion, Sensing/Intuition, Thinking/Feeling, Judging/Perceiving
Total types	4 energies (everyone has a mix, typically 1-2 dominant)	4 base types (with blends)	16 distinct personality types (e.g., INTJ, ESFP)
Key focus	Self-awareness and communication style using Jungian psychology	Behavioural style (how people act under stress, communicate, make decisions)	Personality preferences - how people perceive the world and make decisions
Profile output	In-depth 20+ page profile with team role, communication style, etc.	Straightforward 1-page or summary	16-type profile (e.g., ENTJ, ISFP) with detailed breakdown of strengths, challenges, career fit
Ease of use in the field	Best used with facilitator; more suited for leadership or strategic teams	Very accessible for fast-paced teams	More complex to explain; best in deeper HR or professional development settings
Strengths	Deep personal insights, strong for trust-building	Quick to learn, visual, and actionable	Offers the most detailed understanding of personality and preference
Limitations	Requires certified facilitator; higher cost	Less depth than the others; focuses on behaviour not underlying motivation	Can be abstract or overwhelming for some; not always easy to apply practically
Best suited for	Executive teams, culture change programmes, HR initiatives	Team workshops, short-term collaborations, site teams, frontline staff	Individual coaching, leadership development, role placement, career guidance

Phase 3: Navigating challenges - together

On any complex project, challenges are inevitable. Deadlines, budget constraints, technical surprises, and team tensions can lead to stress or miscommunication. These tools are designed to help project teams move through challenging moments without losing trust or momentum.

What are the objectives?

- Check-in with team members to discuss their concerns and ensure progress is on track
- Create space for constructive feedback and address any healthy conflicts that arise
- Provide the team with tools and strategies for navigating challenges or tensions.

Who needs to be involved?

- At least a team of two per organisation: one leader with executive power in the organisation and the person who is involved in the day-to-day activities on the ground with the others.

When should this happen?

- 4-6 months after start of project.

Why? The outcomes

This is an ongoing phase that should continue through the project.

- Team members can communicate their personal experience of the project, and necessary adjustments can be made
- Constructive feedback can be made and healthy conflicts can be expressed leading to changes and/or conflict resolution.



Phase 3 tools: Collaboration support to navigate challenges

Tool #8: Space for feedback and constructive dialogue

This tool helps teams talk openly about what's working and what's not, so issues get addressed early, and collaboration improves. The focus is on creating a culture where feedback fuels performance and psychological safety.

Tool #9: Informal gatherings for building trust and resolving issues (real-life case studies)

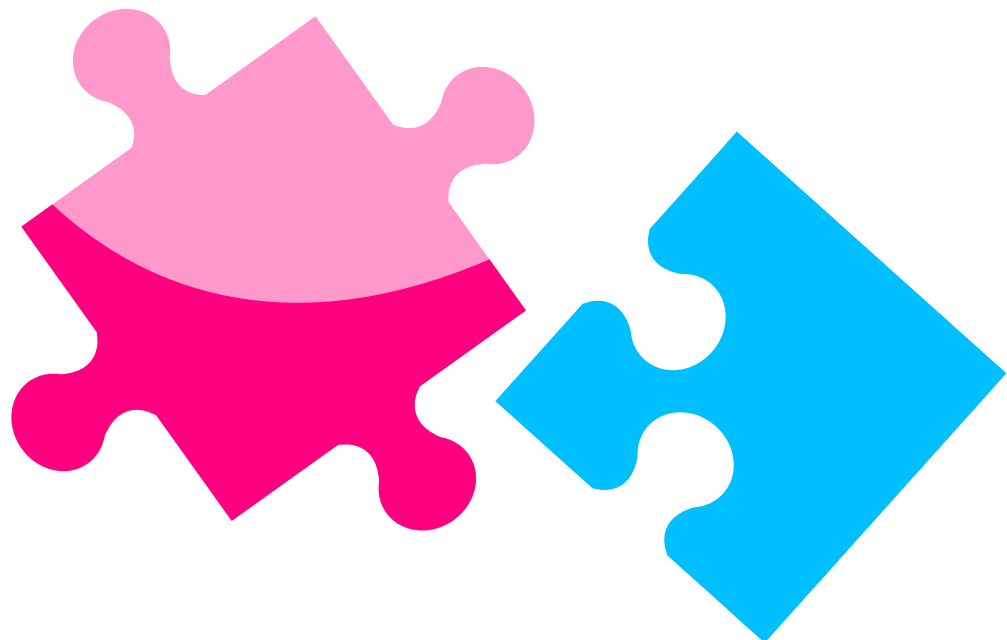
Here, we share real-life case studies and practical techniques that show how informal gatherings have been used in the building and construction industry to navigate team challenges, improve collaboration, and address conflicts.

Tool #10: Act don't react - staying grounded when stakes are high

Simple ways to pause, breathe, and regulate when tensions rise, so team members can think clearly and focus on solutions. Staying grounded can make a significant difference in challenging conversations.

Tool #11: “Non-Violent Communication” (NVC) inspired tool to navigate tough conversations

Disagreements are natural, especially when working on complex retrofit projects where different team members have different areas of expertise. This tool helps the team shift the focus from conflict to finding a solution collaboratively. It introduces “Non-Violent Communication” (NVC) techniques to facilitate respectful conversations and resolve issues without escalating tension.



Tool #8: Space for feedback and constructive dialogue

Why use it?

Creates a dedicated space to address collaboration challenges, resolve conflicts early, and improve team dynamics. The solution-oriented approach ensures smoother, more effective collaboration throughout the project. One-on-one conversations before group sessions provide safe spaces for individual concerns, leading to more productive team discussions.

What is it?

A facilitated, in-person feedback session focused on team dynamics and collaboration effectiveness. Led by a neutral facilitator, it provides opportunity to identify successes, improvement areas, and address underlying tensions respectfully. The emphasis is solution-oriented: identifying what needs to change and how to adapt for better workflow and collaboration.

How to use it?

Pre-meeting preparation

Questionnaire: Send bespoke survey covering:

- What's working well in our collaboration?
- What areas need improvement?
- What frustrations or inefficiencies exist?
- What changes would help address these issues?

Individual sessions

Offer one-on-one conversations for those preferring private discussion or when tensions exist.

In-person workshop

- *Create a safe environment:* Set clear expectations for open, respectful, solution-focused feedback. Reference co-defined team values from earlier project phases
- *Provide structured discussion:* Use questionnaire responses and individual conversations to guide team dynamics evaluation
- *Focus on solutions:* Ask key questions:
 - "What needs to happen for the situation to change?"
 - "What adjustments can improve efficiency and reduce frustration?"
- *Capture actions:* Document concrete, actionable solutions for project integration.

Follow-up

- Plan additional meetings if needed
- Implement agreed changes
- Maintain ongoing dialogue throughout the project
- Track progress in future meetings.

Note: Keep this separate from regular project discussions to maintain focus on collaboration and team dynamics.

Tool #9: Informal gatherings for building trust and resolving issues

Why use it?

Many construction and retrofit challenges are relational, not technical. Misunderstandings, blame, and fragmented decision-making arise from lack of trust-building opportunities across organisational boundaries. This tool uses informal gatherings - over food or drink - to surface tensions, share learning, and repair relationships before issues escalate. These sessions shift culture from reactive to proactive, transactional to collaborative, providing low-cost, high-impact psychological safety.

What is it?

In our research, we have come across several examples of this approach working well in practice.

- **Heathrow Terminal 5:** "Beer and sandwiches" site debriefs after challenges, humanising relationships across trades and dissolving adversarial tendencies.
- **Anglian Water @One Alliance:** Behavioural coaches facilitating informal coffee check-ins to discuss team dynamics and normalise difficult conversations.
- **Brent Cross Regeneration:** "Lunch & Learn" sessions and weekly "open floor" conversations in co-located spaces to reduce defensive behaviours.

- **Crossrail Project:** "Lessons learned lunches" with "fair blame" reviews focusing on system failures, not individual blame.
- **Bristol City Council:** Weekly on-site tea briefings and "lessons-in-a-circle" sessions for housing retrofit teams.

Common success elements

Element	Purpose
Food & drink	Creates relaxed setting for honest communication
No hierarchy spaces	People feel safer to speak without power dynamics
Routine & repetition	Regular check-ins build trust over time
External facilitation	Neutral parties mediate when internal tensions exist
Humanising connection	Story-sharing and humour create emotional bonds

How to use it?

Depending on what challenges the team is facing, these examples can be presented in a workshop for the team to draw inspiration from the examples and co-design their own system specifically based on their needs, values and work dynamics. There is no single right format. What matters is creating a space where people can speak honestly, feel heard, and reconnect as human beings behind the roles.

1. Choose context-appropriate format

- Friday "beer and sandwiches" debrief for site teams (with non-alcoholic options)
- "Tea and trust" sessions for subcontractors
- Shared breakfast before project milestones
- Resident drop-ins with open Q&A

The shift in tone matters more than the food - use neutral spaces away from formal meeting rooms.

2. Keep informal but intentional

Facilitation: Designate someone to welcome and set respectful tone structure. There should be no strict agenda, but prepare 1-2 framing questions:

- "What's been frustrating this week?"
- "What would make next week easier?"
- "What's not being talked about but should be?"

Avoid taking minutes - the value is in airing issues, not recording them.

3. Follow up consistently but lightly

- Not every session surfaces big issues - consistency matters most
- Regular sessions build familiarity and reduce emotional risk of speaking up
- Address recurring patterns in formal settings with participant consent
- Keep tone light, human, and appreciative - focus on connection, not correction.

Regular meet-ups and 'study tours' gave the contractors in the Mayor of London's Retrofit Accelerator - Homes Innovation Partnership a chance to build relationships outside project activities.



Tool #10: Act don't react - staying grounded when stakes are high

Why use it?

Retrofit projects involve inevitable stress from tight deadlines, unforeseen issues, and technical challenges. Stress triggers fight-or-flight responses, leading to harsh reactions, impulsive decisions, and miscommunication that damage relationships and disrupt collaboration.

This tool provides quick techniques to regulate nervous systems, maintain clear communication, and stay solution-focused under pressure.

What is it?

These regulation techniques engage the prefrontal cortex by interrupting automatic stress responses, restoring clear thinking and constructive communication.

1. Breathing before reacting

Physiological sigh (10-second reset):

- Deep inhale through nose
- Just before finishing, take second short sip of air through nose
- Exhale slowly through mouth (like a long sigh)
- Use 1-3 times for noticeable tension drop in under 30 seconds.

Box breathing (16-second cycles):

- Inhale 4 seconds → Hold 4 seconds → Exhale 4 seconds → Hold 4 seconds
- Repeat for 2-3 minutes to significantly reduce tension and restore focus
- Used by Navy SEALs for high-stakes regulation

2. Reframing to break tunnel vision

Stress creates "silo vision" - mental fixation that blocks collaboration. Combat this by asking reframing questions:

- "What hidden opportunities exist in this situation?"
- "If I were an external observer, what would I advise?"
- "What would [ideal person to solve this] do here?"

This shifts your mindset from reaction to problem-solving by creating perspective and distance.



How to use it?

Real-time application

- Use during tense meetings, on-site problems, or communication breakdowns
- Techniques are discreet and can be done mid-conversation
- Designed for immediate practical use, not extended mindfulness sessions.

Team implementation

- Introduce with teams that have established trust
- Frame as professional performance tools (used by first responders, military, high-pressure professionals)
- Normalise use through workshops on stress, communication, or crisis management
- Emphasise adaptability - usable anywhere, anytime pressure mounts.

Note: These aren't just emotional regulation tools - they're practical methods for maintaining effectiveness and clear decision-making under pressure.



Tool #11: Non-Violent Communication (NVC) for tough conversations

Why use it?

Retrofit projects unite diverse organisations with different cultures, pressures, and communication styles. When disagreements arise, issues can become personalised, tensions escalate, and collaboration suffers. This tool adapts NVC principles for construction contexts, focusing on operational impact and clear dialogue rather than personal emotions.

What is it?

Based on Marshall Rosenberg's NVC, we've created a two-part framework approach to help teams move from reactivity to reflection and from blame to shared problem-solving. It recognises that behind every criticism is an unmet need, focusing on what's important for all parties rather than who's right or wrong.

Part 1: Active listening

Before going into details on how to express one's request, it is important to spend some time and focus on the listening part.

Common listening traps that we all fall into include:

- Hearing words but mind computing elsewhere
- Listening to respond rather than understand
- Interpreting through personal filters and prejudices.

Key techniques to encourage active listening:

- Paraphrasing for clarity: "So the site access schedule was revised without communication, meaning your contractors couldn't start - correct?"
- Acknowledging impact: "I see how that change disrupted your sequencing"
- Getting curious: "What would help avoid this next time?"

Suggested activity: Listening pairs (10 min)

In pairs, one person speaks for 2-3 minutes about a real challenge in a current or past retrofit collaboration. The other listens, paraphrases for clarity, and asks one clarifying question. Switch roles. Debrief: What helped you feel heard? What made your explanation clearer?



Helpful perspective check:

When we are faced with disagreement or another opinion, it is always a good practice to ask ourselves these 2 things:

- What do they know that I don't?
- What might they hold true for this behaviour to make sense?

Part 2: Speaking with clarity - modified NVC structure

Once we have established the importance of active listening and considering different perspectives, we can focus on how to express our requests.

We suggest the following modified structure from the classical NVC, for our context of retrofit collaboration:

1. Observation: What happened, factually and specifically? This is about expressing objective facts that happened, as if describing the scene that a security camera could record. The phrasing should be free of judgement to avoid a defensive response.

Example: "The updated schedule wasn't shared in time for us to adjust subcontractor appointments."

2. Impact: describe the operational or project-level effect of the action (rather than focusing solely on how it made you feel).

Example: "That delayed insulation by two days and may affect client handover."

3. Underlying concern: Identify what collaborative principle or shared objective is at risk (e.g. trust, alignment, schedule integrity).

Example: "We need early visibility of changes to protect sequencing and avoid contractual risk."

4. Proposed adjustment or request: ask for a specific, practical change that supports the whole team's performance.

Example: "Can we agree that any changes to the timeline are flagged in writing at least 48 hours in advance?"

Practical exercises

1. Explore examples of impact and underlying needs in retrofit projects

This exercise can be done in the plenary group. Ask the participants to identify the most common challenging situations that would lead to difficult conversations, and from there identify the project impact and the underlying need. See overleaf for some examples to get the conversations started.

This helps teams name what is at stake without triggering blame, and builds a shared language of accountability. After the workshop this can be shared with the team in a format that will encourage them to use in their daily interaction if difficult conversations arise.

Situation	Project impact	Underlying collaborative need
A deadline is missed without communication	Planning disrupted; subcontractors rescheduled	Predictability, timely information-sharing
One partner changes scope without prior discussion	Budget risk, role confusion	Transparency, alignment
Design decision made without consulting affected teams	Rework required, loss of time	Inclusion, respect for expertise
Cost increases announced late	Budget breach, stakeholder pressure	Financial clarity, mutual accountability
Residents' concerns not fed back to design team	Loss of trust, reputational risk	Responsiveness, joined-up delivery

For example:

Without NVC: "The design team keeps changing things without telling us. This is a disaster..."

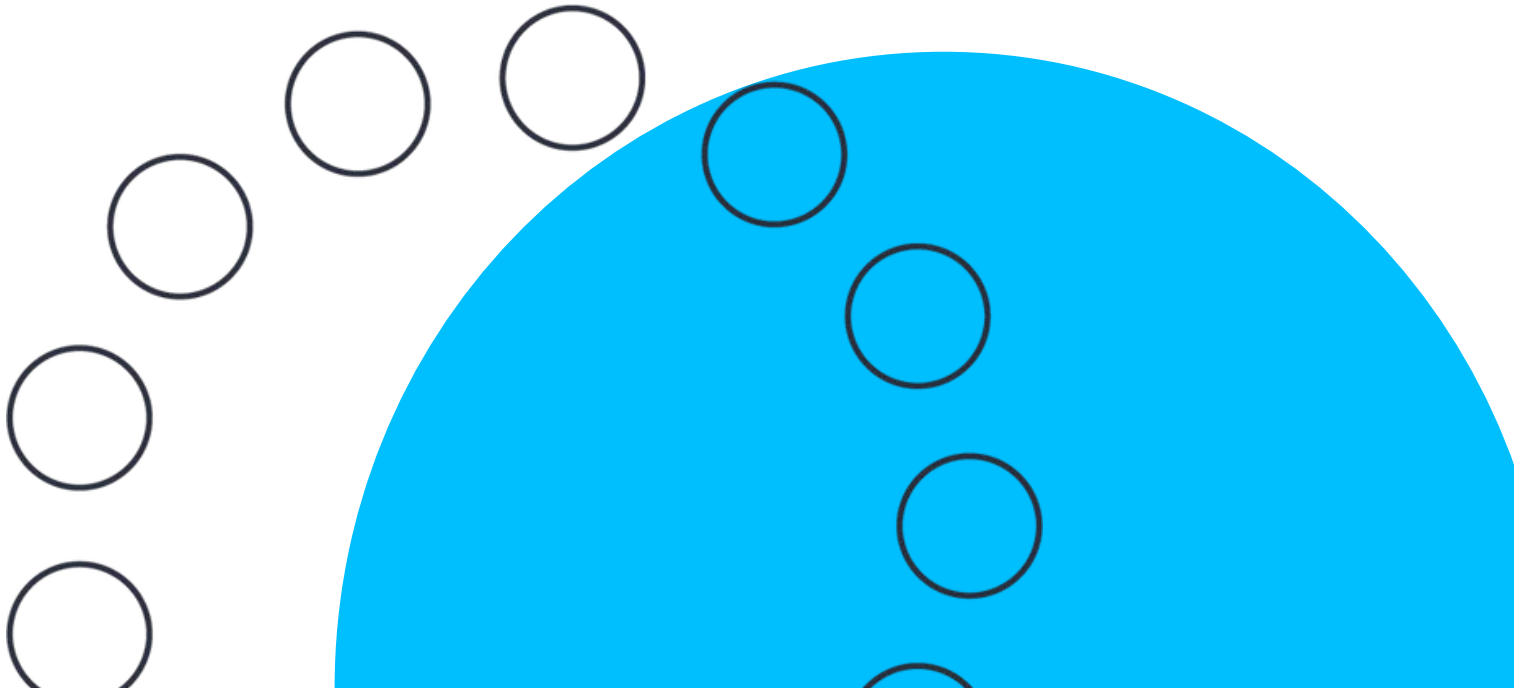
With NVC: "Design changes were introduced last week outside the original plan [observation]. This created on-site confusion and client expectation risks [impact]. We need clear communication channels [concern]. Could we arrange a joint workshop to review changes and develop a shared action plan [request]?"

How to use it

Organise one or more workshops to outline how this approach can help transform blame-focused conversations into solution-oriented dialogue that maintains collaborative relationships while addressing real project concerns.

2. Conflict translation

In pairs of small groups, choose a conflict scenario related to retrofit delivery, write the original dialogue, then reframe it using the NVC adapted retrofit model (observation, impact, concern, request). At the end of the exercise invite the groups to share their experiences and what was or wasn't useful.



Phase 4: Sustaining collaboration - together

You've nurtured trust, new ways of working and effective communication practices - but sustaining collaboration momentum requires constant effort. All the tools presented earlier are relevant and can – and should – be facilitated again at appropriate project milestones. This phase also recognises the power of narrative. Too often the dominant story of retrofit is one of complexity, delay, and high costs. By sharing stories of success we can shift the narrative, so working collaboratively becomes the new “business as usual”.

What are the objectives?

- Reinforce collaborative practices and keep team alignment strong across project milestones, especially through handovers, shifting teams, and evolving technical or financial conditions
- Shift the dominant narrative of retrofit from complexity and risk to one of success through collaboration.

When should this happen?

- This phase runs throughout the second half of the project, special attention should be paid at key transition points such as:
 - Changes in team composition
 - Milestones with financial, technical, or political stakes
 - Close-out and handover stages.

Who needs to be involved?

- The full core project team and executives of each partner organisations
- Wherever possible, include voices from those directly impacted by the retrofit (e.g. residents, users, site teams).



Phase 4 tools: Nurturing collaboration as an ongoing process

Tool #12: Storytelling to shift the narrative

This tool helps project teams surface real, on-the-ground examples of when collaboration made a difference. It turns everyday project wins into compelling narratives that build belief and momentum, internally and externally. Over time, these stories create the social proof that collaborative retrofit is not just possible, but powerful.

Tool #13: Celebration

In the urgency of retrofit work with tight timelines, shifting scopes, and constant problem-solving, it is easy to focus on the challenges and skip over the wins. But celebration isn't a luxury, it is a practice that fosters cohesion, strengthens trust, and helps teams reconnect with purpose.

All other tools remain relevant

Trust, alignment, and collaboration need to be revisited and refreshed over time. Tools from earlier phases can and should be reactivated at strategic moments. Phase 4 is about maintaining a collaborative culture, not assuming it will continue on its own.



Tool #12: Storytelling to shift the narrative

Why use it?

Stories are powerful – they shape what people believe is possible and influence our expectations, perception of risk and levels of trust. In retrofit, dominant narratives often centre on failure and delays. By sharing real examples of collaborative success, we can:

- inspire confidence and make collaboration credible
- provide evidence that retrofit delivers when teams work differently
- reframe retrofit not as a technical challenge, but as a collective opportunity for innovation, investment, and transformation.

What is it?

A structured approach to capture and share moments where collaboration made a real difference in retrofit projects, turning ground-level experiences into compelling evidence for change. Let's build a counter-narrative that retrofit done collaboratively can succeed - on time, on budget, and good for all involved!

How to use it?

1. Identify the moment

Look for instances where:

- A challenge was overcome through shared effort
- Delays were avoided or costs saved through collaboration
- Outcomes improved due to teamwork

2. Use the three-part framework

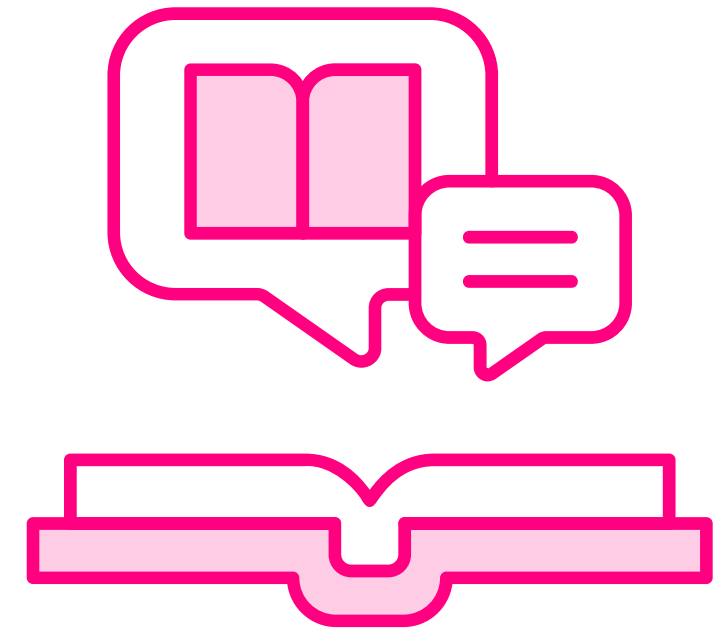
- Challenge: What situation were you facing?
- Turning point: What collaborative action was taken?
- Result: What changed as a result?

3. Connect to project values (optional)

Reflect on how the story reinforces your shared "one project mantra" from [Tool #4](#).

4. Use collaborative language

Emphasise collective ownership: "We realised...", "We decided to...", "Together we were able to..."



5. Choose your format

- Short written story for a blog or case study (100-300 words)
- 1-minute video clip
- Story slide with bullet points
- Team reflection at project close-out

6. Share strategically

- Communications to stakeholders
- Onboarding new partners
- Website and Social media
- Team briefings
- End-of-project reviews

Making it stick

Build storytelling as a habit by:

- Asking for one story at the end of each project phase
- Inviting partners to contribute from their perspective
- Sharing stories between projects, not just within them.

Mayor of London's Collaboration Hub - an example of storytelling from Energiesprong UK's #RetrofitDisruptors campaign

It may be in the name, but true collaboration didn't necessarily come naturally to the four solution providers in the Collaboration Hub – with Andy Merrin, Director of Innovation and Decarbonisation at United Living (at the time) likening the first meeting to a poker game: “who's going to show their hand first?”

But as the project progressed, it became easier as they realised that - from communicating lessons to sharing suppliers – this transparency was only going to help, not hinder, their progress.

“We're not going to reach anywhere near the scale we need if don't collaborate,” says Andy, with Vicky Fordham-Lewis (Managing Director of Osborne at the time) adding, “There is more than enough work to go around. And actually, if we work together, we'll just do it better and more efficiently for the benefit of the customer.”



Tool #13: Celebrate

Why use it?

In urgent retrofit work with tight timelines and constant problem-solving, teams easily focus on challenges while skipping wins. Celebration isn't a luxury - it fosters cohesion, strengthens trust, and reconnects teams with purpose. Regular acknowledgment creates rhythm, counters stress, and reinforces "we see each other, we've done something worthwhile, we're in this together."

What is it?

A practice of pausing to recognise achievements throughout the retrofit lifecycle, helping teams stay motivated and connected. It doesn't require large budgets - it's about creating meaningful, timely moments that maintain momentum and deepen team cohesion.

Two levels fit different contexts:

Small celebrations (informal recognition)

- Start meetings by acknowledging what went well
- Share photos/videos of completed retrofit elements in team chats
- Host casual "end-of-day" gatherings after difficult phases
- Use "shoutout boards" in site offices for positive feedback.

Milestone celebrations (structured recognition)

- Site BBQ/lunch for major stage completion (windows, MVHR commissioning)
- "Handover celebration" for energy performance certification
- Awards/certificates for safety records, innovation, resident engagement
- Resident open days to celebrate milestones and strengthen community relations
- Team storytelling sessions after challenging retrofit cycles.

How to use it

1. Make it timely and consistent

Don't wait until project end. Schedule celebrations with natural project phases:

- Weekly: Friday shout-outs or "win of the week"
- Milestones: End of design phase, first install
- Task completion: Planning submission, resident engagement rounds

Create space in meetings, site huddles, or WhatsApp groups where celebration is normalised.

2. Make it visible and shared

Encourage mutual celebration with prompts:

- "Who made your work easier this week?"
- "What small win are you proud of?"
- "What's gone better than expected?"

Use visible appreciation boards (physical/virtual): post-its, cards, Teams channels, site office whiteboards.

3. Keep it genuine

Avoid performative obligation. Maintain light, informal, sincere tone. Allow humour, creativity, emotion. Teams might add music, stories, food, or keep it quiet and simple.

4. Adapt to your culture

Co-design approach together:

- How do we want to mark progress?
- What feels right for our context?
- What makes celebration feel safe, inclusive, appreciated?

5. Celebrate effort, not just outcomes

Don't wait for perfection. Celebrate persistence, learning, showing up, turning things around. Recognise invisible labour: the calls keeping residents on board, the quiet fixes to avoid delays.



After winning a World Habitat Award in 2024, the Energiesprong Global Alliance held several celebrations with teams across Europe - with the trophy passed to each in a 'mini ceremony' - recognising that the achievement was a joint effort from all.

Conclusion: Let's transform retrofit - together



Collaboration is not only an add-on to technical excellence, it is a condition for it. In complex retrofit projects, where risks are high and pressure is constant, it is easy to deprioritise how people work together in favour of what needs to be delivered. Yet experience consistently shows that when collaboration falters, delivery suffers.

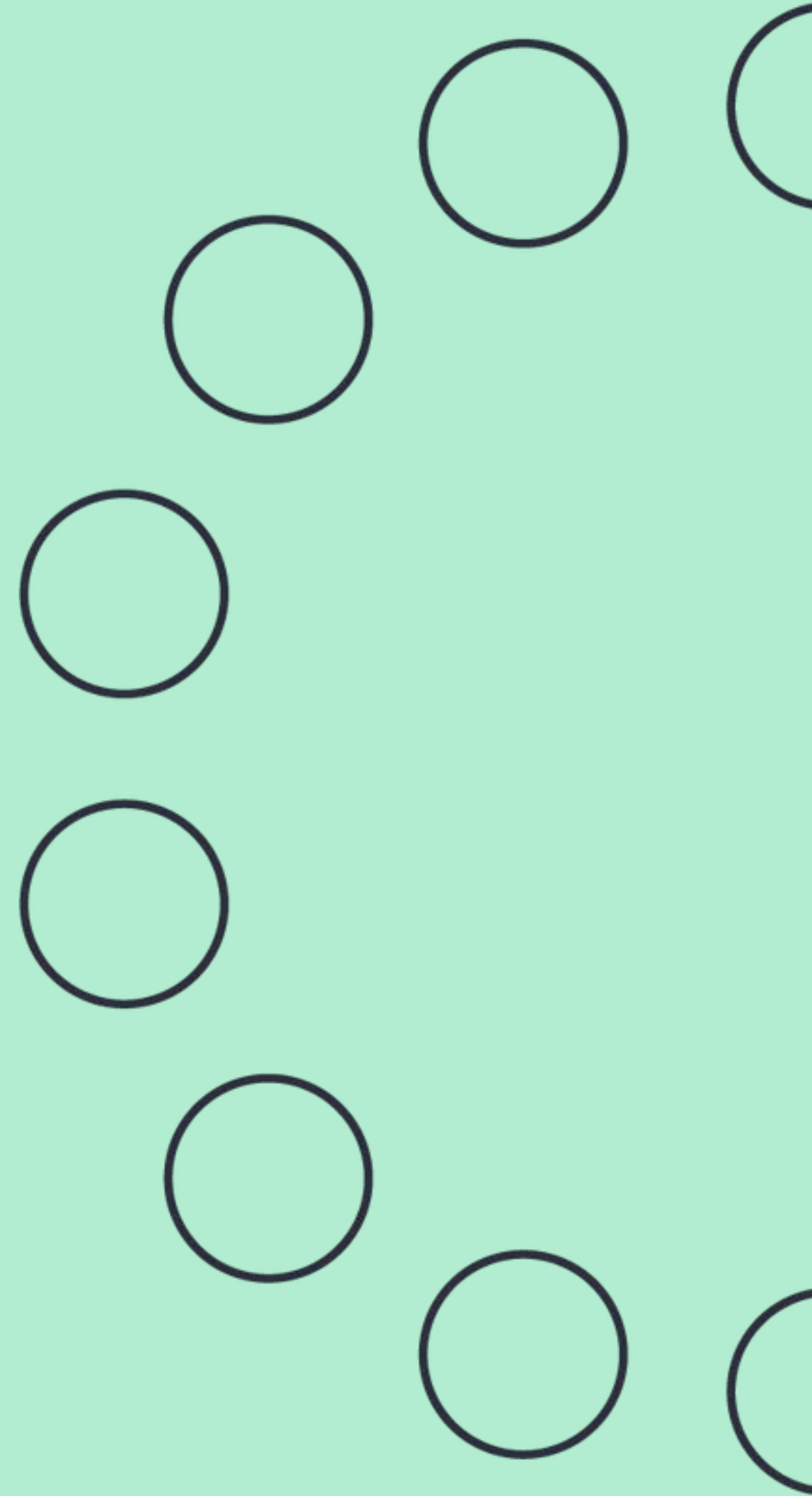
This toolkit recognises collaboration not as a fixed state but as a dynamic process, one that evolves over time, shaped by relationships, and real-world pressures. It provides practical, adaptable tools for each stage of a project, helping teams lay strong foundations, navigate tension, and sustain trust over time. Crucially, it also helps make the invisible visible: the values, behaviours, and communication patterns that often determine whether true collaboration can emerge.

Culture change in the retrofit sector will not happen through tools alone. It will require people who are willing to work differently and lead by example. It will require teams who stay committed not just to delivery, but to how delivery happens. And it will require stories, shared openly, told honestly, and used to shift the prevailing narrative of retrofit from one of difficulty to one of possibility.

This is the moment to choose collaboration. Let's commit to making collaborative working a reality. We know it's not simple or easy and there will be many challenges along the way but, with it, we stand a real chance of unlocking retrofit at the scale and speed required for our net-zero goals.

Appendix 1

Full collaboration
case studies



Case study one: Heathrow T5

The Heathrow T5 project was a programme with 18 projects, and 147 sub-projects which ranged from £2m budget to £300m. It included 50,000 people working towards a common goal, from 20,000 companies. Based on statistics, the provisions for the Heathrow project were that it would open one year late, be a billion overspent, kill two people and seriously injure 400 others.

The £4.3bn project was completed on time, and on budget.

How did they achieve this? Part of the answer is that they pushed collaboration and partnering to a new level. The following focuses on the learning regarding collaboration.

Overview

The British Airport Authority (BAA) employed an Integrated Project Delivery (IPD) contract to build the Terminal 5 project at Heathrow airport. That agreement was based on principles of trust, collaborative work, and problem solving. It tackled the perceived barriers of 'culture change' and 'reluctance to acknowledge risk', with the relationship between client and contractor fundamental to success.

BAA formed long-term team relationships in order to deliver the T5 project, rewarding their contractors for completion under the target budget, consistency in safety and for time and quality performance.

Other key aspects of success at T5 were related to managing design change, paying suppliers for their work, and rewarding exceptional performance. Very importantly, the ground-breaking T5 Agreement was significant because BAA held most of the risk. This allowed space for innovation and created the opportunity for people to perform at levels they had not been allowed to before.

“Declared future state”

At the core of the approach to safety was the approach of getting everyone involved to declare a different future and to free their minds from the past. To get out of this cycle, the key is to focus on the future as a possibility. No matter how hard people focus on the future, thinking and behaviours are still governed by the past, even with the addition of a stretch target.

This becomes self-limiting and only a small amount of movement is possible, rather than a radical and fundamental shift. Using an approach of 'Declared future state' helped everyone sign up to delivering T5 incident and injury free.

Some of the methods used included:

- 800 managers - 2 day commitment workshop.
- 1,200 supervisors 1 day training programme.
- Every member of the workforce included in their induction.

- ½ day training sessions and refresher briefings.
- 150 in house trainers from the frontline workforce were trained to deliver the workshops.
- 12 – 15 senior leaders monthly leadership forums on safety. Cascaded to 8 project leadership teams across project.

There was also a leadership shift. In 2003 BAA stopped the site, as the management team felt there was unsafe night working taking place. They gathered key players together to ensure safety was fixed. This was symbolic of safety coming before production, and showed how serious BAA was about safety.

How did they create the right culture?

There had been previous progressive projects where integrated teams have done good work in a collaborative way. T5 contractors, such as Laing O'Rourke, Mace, SPIE Matthew Hall and Severfield-Rowen, had experience of working on the £100m Stanhope office developments which were not open book, but nonetheless collaborative. Mark Reynolds from Mace talked of the 'beer and sandwich sessions' when there were problems, which normally helped the team find a solution.

This was not a standard way for a construction contract to run. Stakeholders were being asked to trust in a different way. Communities of people who had been trained not to trust, were being asked to trust.

The T5 principles flowed through everything. Some initially thought this would not work. Some suppliers liked it in theory but didn't understand how it would work. Critically BAA used early testing or challenging instances to build trust by behaving in a supportive way, not resorting to blame and legal advisors.

The T5 agreement distinguished between owning the risk which BAA did and doing work to mitigate the risk or exploit opportunities, on which the latter suppliers were very much held to account.

The management team engendered and operated with vigilant trust. At time, blind faith was in operation (particularly before management information was ready at the start of the project).

People with the right expertise and experience as well as approach were head hunted from other companies or industries where necessary. Where companies or people did not perform, companies were asked to swap their teams, or were ultimately asked to leave. This created a culture of performance and showed suppliers that they could trust that the Client was protecting the joint incentive.

Case study two: Learning from contrasting retrofit experiences

Collaboration is not just about working together, it's about creating a shared vision, building trust, and fostering an environment where all parties, from contractors to residents, are aligned towards a common goal. In deep retrofit projects, this collaborative spirit can make the difference between success and failure.

By reflecting on two case studies, one with successful outcomes and the other with notable challenges, key lessons emerge that underscore the importance of culture change and collaboration in achieving sustainable project results.

These case studies are drawn from a broader research report, with the focus here placed specifically on findings related to collaboration and culture change. They have been anonymised.

Case study A: A long-standing regional housing partnership

This project formed part of a national innovation programme to accelerate the adoption of clean energy technologies. The housing provider and principal contractor had an existing 15-year strategic partnership focused on upgrading post-war housing stock, including large-scale refurbishments, thermal upgrades, fire safety improvements, and enhancements to public spaces. They had also jointly invested in local employment and youth skills development as part of a broader regeneration agenda.

A key success factor was the early and consistent use of dedicated Resident Liaison Officers (RLOs) who engaged directly with tenants to explain the retrofit process and its benefits. This helped manage expectations and maintain trust. The contract structure for the project was a transparent cost-reimbursement model with a target cost per home, allowing for open-book accounting and trust-based problem-solving.

Case study B: A large-scale urban retrofit initiative

This project was part of an urban retrofit programme designed to test whole-house retrofit solutions across a diverse and ageing housing stock. The initiative was built on the premise of pipeline visibility: participating housing providers committed to a programme of retrofit work, offering contractors long-term certainty in exchange for investment in skills, innovation, and supply chains. The intention was to move from fragmented delivery to a collaborative model where both costs and lessons could be shared.

However, the specific project reviewed faced major delivery challenges. The housing provider had hoped early commitment would attract full engagement from the contractor, but the contractor's involvement was delayed and limited. Contractual relationships remained transactional, and information was not shared openly between parties. The resulting mistrust, late problem escalation, and limited stakeholder engagement led to inefficiencies and cost increases. The adversarial culture stood in contrast to the collaborative intent of the broader programme.

Key findings on collaboration and culture change

1. Trust and communication are the foundation of successful collaboration

Case study A demonstrated the value of early alignment, with open-book accounting and clear communication structures enabling transparent, trust-based relationships. Challenges were addressed collaboratively, avoiding delays and fostering a sense of shared ownership.

Case study B struggled due to limited transparency and weak communication. Critical stakeholders were excluded from decision-making, creating suspicion and reactive problem-solving. The lack of trust led to conflict and inefficiencies.

Lessons learnt:

- Trust between stakeholders helps reduce misunderstandings and fosters collaboration.
- Transparent communication, from financial matters to design updates, ensures everyone is on the same page.
- When information is freely shared, it enables proactive problem-solving rather than reactionary fixes.
- Building a culture of transparency helps prevent delays and cost overruns by addressing issues early.

Lesson 2: Early stakeholder involvement sets the stage for collaboration

In case study A, contractors were engaged from the outset. This allowed input into design and compliance, while enabling risk identification before the project was fully underway. This early inclusion created shared accountability.

In case study B, the main contractor was brought in late and remained at a distance, leading to a fragmented team culture. A lack of shared purpose and disconnection from early-stage decisions contributed to delays and misalignment.

Lessons learnt:

- Early involvement of all stakeholders, including subcontractors and key suppliers, ensures that everyone is aligned towards the project goals.
- Early engagement allows for the identification of risks and challenges before they become critical issues.
- Inclusive collaboration from the start fosters a sense of shared responsibility and accountability among all parties.
- A fragmented project team cannot effectively collaborate to resolve issues or innovate solutions.

Lesson 3: Collaborative contract models drive shared success

Case study A used a cost-reimbursement model with shared risk and open data. This enabled honest conversations, aligned objectives, and reduced the pressure to assign blame. The result was a team focused on solutions and quality.

In contrast, case study B relied on a rigid, risk-averse contract structure. Without mechanisms for shared risk or reward, each party prioritised self-protection over collaboration, leading to mistrust and misaligned actions.

Lessons learnt:

- A contract model that promotes shared risk and reward helps align the interests of all stakeholders.
- Rigid models hinder flexibility and delay innovation.
- A culture of aligned incentives and shared responsibility ensures that all parties are motivated to address challenges together.

Lesson 4: Resident engagement is critical to project success

In case study A, resident engagement was integrated from the beginning. RLOs ensured two-way communication, helping residents understand and support the work being carried out. This engagement contributed to smoother delivery and fewer disruptions.

Case study B saw minimal resident involvement, which led to alienation, resistance, and disruption. Concerns went unaddressed, escalating into conflict and delays that impacted the entire project team.

Lessons learnt:

- Engaging residents early and continuously helps build trust and ensures the project meets their needs.
- Actively involving residents fosters a sense of ownership, reducing resistance and improving project outcomes.

- Resident satisfaction is integral to the success of retrofit projects, both in terms of timeline and quality.
- Without proper engagement, retrofitting work can become disruptive and negatively impact the community.

Conclusion: Culture change as a driver for successful projects

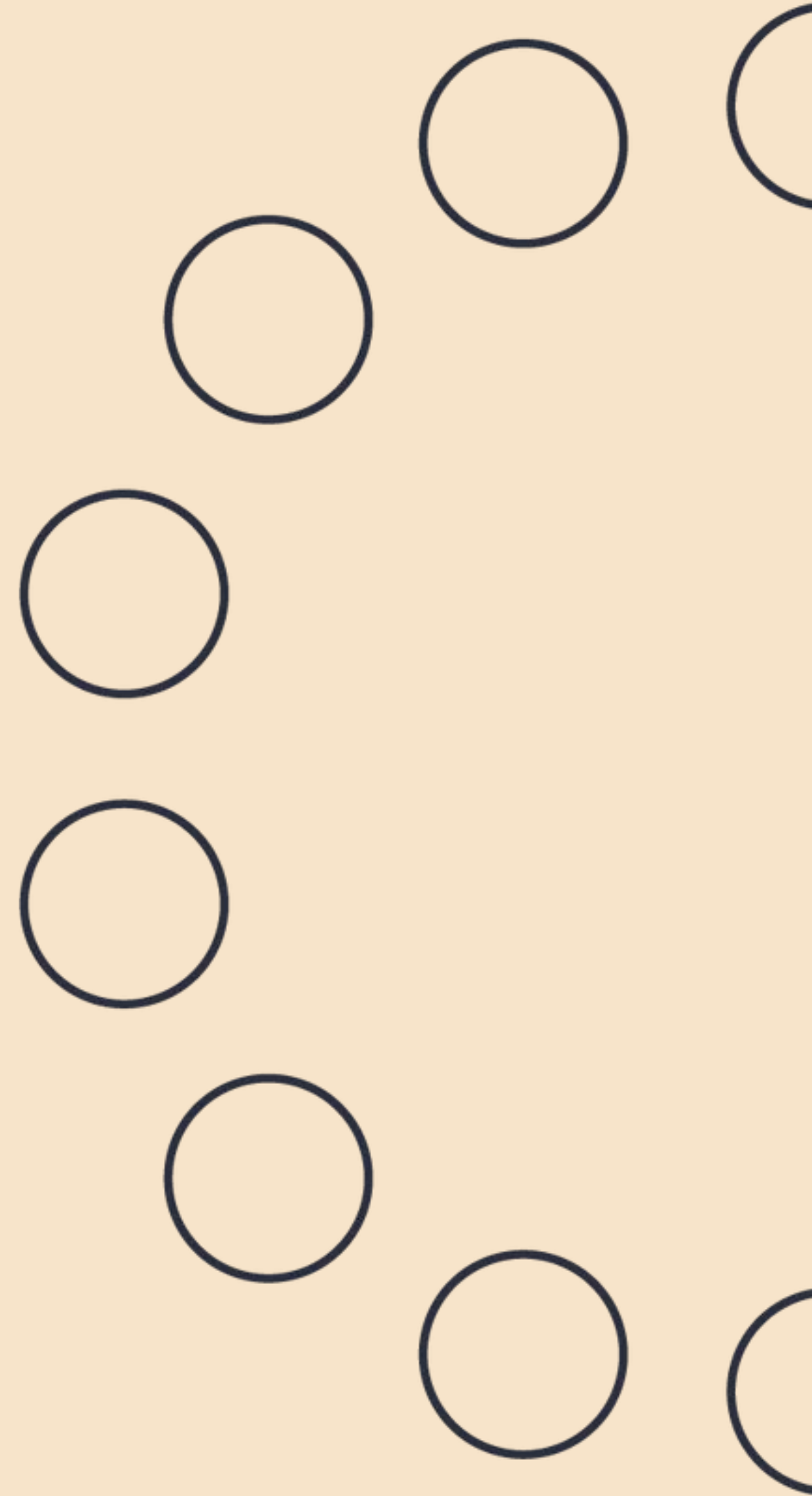
These case studies illustrate that culture and collaboration are not peripheral to retrofit delivery—they are central. Successful deep retrofit projects are driven by collaboration, early stakeholder involvement, transparent communication, and a culture of trust. Where these elements are present, projects can thrive, overcoming challenges and achieving their goals.

Conversely, the absence of a collaborative culture leads to delays, conflicts, and ultimately, project failure. To achieve a successful retrofit project, the culture must shift towards openness, shared goals, and mutual respect among all parties, including residents.

As scaling retrofits is becoming a more pressing issue, investing in the human factors of collaboration will be essential to achieving success at speed and scale.

Appendix 2

“Rewiring Retrofit” - retrofit
collaboration cards



Main issues

Delays

Additional
costs

Poor
performance

Causes

Lack of anticipation, data and resources on the client's side

Technical offer still limited in certain areas

Fragmented, underdeveloped supply chain

Cumbersome and sometimes contradictory administrative rules

Access or logistics challenges on construction sites

Lack of visibility on scale or upcoming projects

Causes

Lack of coordination between trades

Tenants and leaseholder challenges

Skills and labour shortages

Inaccurate or incomplete site instructions

Unreliable technical data/
existing surveys

Uncertain, insufficient or
poorly adapted funding

Causes

Dependence on weather or
availability of materials

Value leakage

Lack of risk management:
technical issues or unforeseen
circumstances

Types of contract

CLC features

Alliance based/
Partnering contract

Supply chain availability and
reliability

Collaboration mindset

Disintermediation

Risk management

Enabling finance

CLC features

Enabling scale

Collective governance

Reliable data

Transparency

Transform-ER: Revolutionising retrofit to enable one million home upgrades every year

Transform-ER (Transform.Engage.Retrofit) is a game-changing, consortium-led project funded by Innovate UK that's tackling retrofit's biggest barriers to scale - enabling one million home upgrades every year by 2030. It's designed to create a cohesive, industrialised sector that delivers high-performance, cost-effective solutions through a standardised process.

At the heart of the project is a commitment to collaborative working and this toolkit shares the framework and tools that have been developed to support organisations trying to move the industry towards scale and speed to achieve our 2050 net-zero goals.



Find out more
bit.ly/transform-ER