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Reframing Compliance as Culture

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Preface

This thesis marks the completion of my MSc. Strategic Product Design at TU Delft. It has been both an academic project and a personal journey in learning how design can engage with complex organisational challenges.

The opportunity to work with RAI Amsterdam and Basement Chefs gave me the chance to explore food-safety compliance in a real and demanding setting. What began as a practical problem in kitchens soon became a deeper question of how behaviour, structure, and culture intersect in organisations.

As a design researcher, my role was to move between theory and practice: making sense of lived experiences, translating them into insights, and testing how design could support change. This process shaped not only the outcomes of the project, but also my understanding of what it means to design with people, rather than for them.

Looking back, this thesis reflects both the challenges of working in high-pressure contexts and the possibilities that open when practice and theory are brought together.

I hope you find this work as engaging to read as it was for me to carry out.

Acknowledgements

This thesis has been made possible through the guidance and support of many people.

I am grateful to my supervisory team. To my chair, Bart, thank you for your targeted advice that helped me navigate the challenges of this research. To my mentor, Milad, thank you for making this project possible by opening the door to RAI and for supporting me in shaping it into a thesis. I am thankful to both of you for your time, guidance, and encouragement to push further in my work.

My sincere thanks to my company mentor, Rientz Mulder for his openness and support throughout this research. I am grateful to Huib, Richard, Imre, Johan, Paul and all the research participants for taking the time to share their insights and respond to my many questions. I'm truly grateful to the Basement Chefs for welcoming me into their world, allowing me to see the kitchen workings from their perspective, and for the many delicious desserts along the way—an unexpected but memorable perk of this research. Their participation shaped this thesis, which is ultimately a reflection of their experiences, and I hope the outcomes will in turn be of value to them.

On a personal note, to my parents thank you for always providing me with the best opportunities in life. To Sayak, for being the calm that grounded me in the midst of chaos. To Roshni, for her unwavering support across timezones. And to my friends in Delft, Komal, Viktoria, Vidhi, Lina, and Shubham — thank you for being my support system here.

Executive Summary

Keywords:
Compliance, Food Safety, Hospitality, Behaviour Change, Strategic Design, Organisational Culture

This thesis investigates how food-safety compliance in hospitality kitchens can be reframed from a top-down requirement into a shared practice. Conducted with RAI Amsterdam's Basement Chefs, it addressed the recurring issue that checks were often performed but not logged, creating gaps in accountability.

The central research question asked what behavioural, structural, and environmental factors contribute to the postponement or omission of compliance logging despite staff awareness. Three sub-questions examined how service urgency shapes prioritisation, how role definitions and accountability affect ownership, and how the placement and usability of compliance tools influence task execution.

A mixed-method design research approach combined fieldwork (shadowing, interviews, behavioural profiling), literature review (behavioural science, compliance management, organisational studies), and participatory design (workshops, prototyping, and in-context testing).

Findings show omissions were not caused by lack of knowledge but by systemic misalignment. Behaviourally, production pressures displaced logging even when staff valued safety. Structurally, accountability was diffused, with core staff assuming responsibility while flex staff excluded themselves. Environmentally, the RMONI system was poorly integrated into workflow, with access friction and low salience limiting use.

In response, the research developed BaseCode, a set of interventions including a roadmap to stage change, a dashboard to make contributions visible, staff profile cards to tailor interventions, and the CODE meeting framework to embed reflection. Together, these shifted compliance from an individual burden to a shared responsibility embedded in team identity.

The thesis contributes theoretically by showing that breakdowns stem from gaps in ownership and environmental fit rather than awareness deficits, and practically by demonstrating how behavioural and strategic design can be combined to build cultural infrastructure. While situated in one organisation, the study highlights conditions relevant to other high-pressure, high-turnover contexts and points to directions for further research.

Note on Style

Participant quotes are included in the text to foreground lived experience. The visual style combines raw notes from each phase with structured insights, reflecting the project's dual focus on digital and physical experiences.

The Lenses I Carried

This project's nature aimed to bridge theory with the lived reality of a busy kitchen. To do that, I found myself shifting between different roles sometimes making sense of complexity, sometimes translating, sometimes facilitating, and sometimes challenging existing ways. These lenses weren't steps in order, but ways of seeing that overlapped and pulled against each other.
Together, they shaped how I noticed patterns, framed problems, and designed responses.
Throughout the thesis, you will see short notes that show how each of these lenses came into play.

Sensemaker

how do I make sense of complexity?

I treated theory as a way to stay curious, not to hand out answers. In the kitchen, it helped me read routines and frictions without boxing them in: noticing patterns, gaps, and the messy reality of compliance.

Key Activities:
1. frame problem
2. define goal
3. observe current scenario

Translator

how do I express others' points of view?

Chefs didn't speak "design," and they didn't need to. My role was to listen and turn their pace, language, and priorities into insights and tools they could use without slowing down.

Key Activities:
1. Listen and observe in context
2. Translate perspectives into insights or tools
3. Align design language with kitchen priorities

Facilitator

how do we move forward together?

I kept the project moving while leaving space to pause and reflect. This meant balancing schedules with conversations, and helping different people connect around a shared goal.

Key Activities:
1. Coordinate chefs, managers, supervisors
2. Balance progress with reflection
3. Adapt communication to shifting contexts

Challenger

What if we see it differently?

Challenging was about shifting perspective — seeing things in another light and opening space for new possibilities.

Key Activities:
1. Surface hidden tensions and assumptions
2. Reframe compliance
3. Explore the gap between "should" and "does"

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Chapter 1

Introduction

This chapter sets the context of food-safety compliance in hospitality kitchens, introduces the RAI Basement Chefs case, defines the research aim and scope, and explains the approach used to investigate compliance as a behavioural, organi-sational, and environmental phenomenon.

1.1 What is Compliance and Why it Matters?

In the hospitality industry, compliance refers to the adherence to established laws, protocols, and standards that govern operational safety, quality, and consistency (Manning, 2018a). In the domain of food safety, this typically includes legal regulations, internal procedures, and industry-recognised standards such as **HACCP** (Hazard Analysis and Critical Control Points), **ISO 22000**, and **BRC** (Brand Reputation through Compliance). These systems are designed to protect public health, minimise risk, and maintain safety and quality standards across the food service chain (Panghal et. al, 2018).

Food safety compliance is particularly important in hospitality kitchens, where the pace of work is high, staffing structures are varied, and the potential consequences of error can be severe (Manning, 2018a). Ensuring that food is stored, handled, and served safely is not only a legal obligation but also a core responsibility tied to guest wellbeing and brand reputation. In this context, compliance provides the structure necessary to prevent incidents, promote consistency, and build trust with stakeholders (Yinnais, 2009; Manning, 2018a).

While the formal components of compliance, such as checklists, reporting tools, and training, are essential, they are not always sufficient to ensure consistent behaviour in practice (Yinnais, 2009). Many hospitality organisations are beginning to recognise that effective compliance depends not only on having systems in place, but also on how these systems are understood, adopted, and sustained by staff in real-world conditions (York et. al., 2009). Understanding what compliance means, and why it matters in fast-paced operational environments like hospitality kitchens, provides a foundation for exploring how it can be more effectively embedded into daily routines and team culture (Yiannas, 2009).

Is compliance more about trust between people than adherence to protocols?

1.2 Research Context

1.2.1 RAI Amsterdam as an Organisation

RAI Amsterdam is Netherlands' landmark events and exhibition centre, located at Europaplein in Amsterdam. Since its establishment in 1961, the venue has hosted a diverse array of conferences, exhibitions, corporate functions, and trade shows; where hospitality and guest service are integral to guest experience (Hajiamiri, Calabretta, Lloyd, & Korkut, 2024).

1.2.2 The Basement Chefs and Food Service Operations

Beneath the main halls lies a complex network of underground corridors and service areas known as the Basement Chefs (RAI Amsterdam, 2023), the operational core of RAI's food and beverage production. This fast-moving culinary infrastructure supports a wide variety of food service formats, from high-end plated dinners to casual buffets and crew catering. Food production is divided into specialist areas including hot kitchen, cold kitchen, bakery, and assembly (RAI Amsterdam, 2022). Ingredients are processed in a centralised production flow, then assembled and dispatched based on event-specific needs. As the executive chef explained in the initial meeting: **"Production does everything... the food isn't labelled by event type, it just comes through and is prepared according to what's needed."** This modular workflow allows for flexibility in matching production outputs to different service contexts.

Figure 1. RAI Amsterdam Building (Personal photograph, March 12, 2025).

Their rhythm was production first, so my job was to fit into that pace without slowing things down

1.2.3 Team Structure and Staffing Dynamics

The kitchen team comprises 21 full-time staff and a rotating group of freelance and flex workers, who are integrated based on events' and operational requirements. While the team is formally structured by role and speciality, responsibilities are dynamically redistributed according to workload. **"We are one team"** the executive chef noted, **"but everybody has their own speciality. Some are in production, some in catering, some in events."** Team formation is event-specific, and staffing in every shift often differs from week to week. Usually, new kitchen staff are introduced through informal mentorship. As the executive chef explained, **"We always match the new guy to an experienced guy."** This system of peer learning enables staff to acclimate quickly to RAI's operational environment, though it could also potentially lead to variation in knowledge transfer, particularly regarding compliance practices.

Mentorship filled the gaps where formal training didn't exist.

This rotating structure made me wonder how consistent compliance could look like?

1.2.4 Current Compliance Systems and Digital Tools

At its core, Food safety compliance at RAI Amsterdam is structured through a multi-layered governance model known as **RAI's Three Lines of Defence.** This framework provides a clear separation of responsibilities across the organisation. The first line comprises the kitchen staff and operational chefs, who are responsible for executing and documenting food safety actions during daily service. The second line consists of a compliance officer who oversees processes, identifies gaps, and offers support where needed. The third line involves external auditors and formal evaluation mechanisms, providing high-level accountability and strategic oversight.

Understanding RAI's compliance landscape began with a simple question to the Compliance Officer:

How is food safety maintained across such a dynamic, high volume operation?

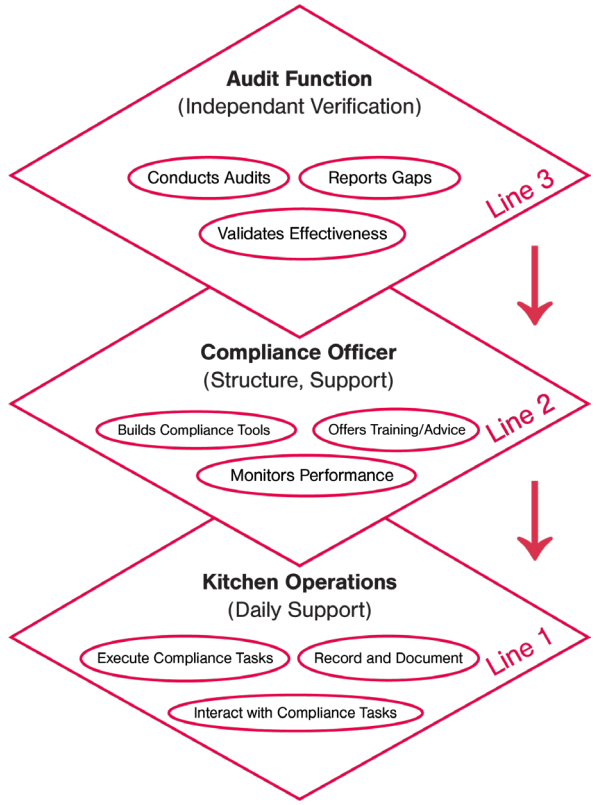


Figure 2. RAI's Three Lines of Defence for Compliance (Visualised from Interview with Compliance Officer)

1.2 Research Context

Figure 3. Cover of HACCP Handbook RAI Amsterdam

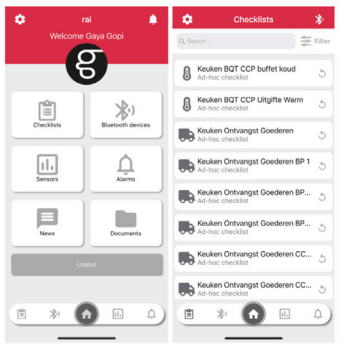


Figure 4. RMONI app for RAI

Within this structure, the foundation for daily compliance practice is the **RAI HACCP Handbook**, a detailed internal document that adapts the **HACCP** methodology to the specific operations of RAI. Spanning approximately 90 pages, the handbook outlines procedures for hygiene control, allergen management, temperature checks, cooling logs, and documentation requirements. Tasks are distributed across daily, weekly, and monthly routines, depending on the kitchen zone and operational risk level. These routines are intended to guide the actions of the first line of defence.

To support real-time documentation of these routines, RAI has introduced a digital application platform called RMONI. Developed to replace an earlier paper-based system in which completed forms were scanned and uploaded to SharePoint, RMONI enables staff to log food safety actions, such as temperature checks, directly through a mobile app. **"You'll click here, do a temperature measurement, enter the value—done,"** the executive chef explained, highlighting the intended simplicity of the tool. RMONI also centralises compliance records and allows for the monitoring of outstanding checks across teams and shifts.

RMONI is currently in the rollout phase across all kitchen operations. While many core staff are familiar with the tool, engagement among temporary or flex workers varies. As one of the operations chefs noted, **"We're telling them, there's not a real training for it... maybe we have to apply something... we didn't do it yet."** At present, onboarding into the system tends to be informal, often occurring through peer explanation or ad hoc support during service. This means that while the tool is accessible, its use is not yet fully embedded within the workflow. The shift to a formal management system, tailored handbook, and digital tracking created a timely opportunity to investigate how food safety compliance is understood and practiced on the ground—within a wicked problem space (Sanders & Stappers, 2012) where structures, dynamics, and tools intersect in daily kitchen work.

1.3 Research Aim and Scope

1.3.1 Research Aim

At first glance, improving the RMONI mobile application might appear to be the logical solution—adding reminders or new features to encourage use. This research, however, takes a step back from the tool itself to examine the behaviour around it. Why is adoption inconsistent? What frictions prevent logging from becoming routine?

Early discussions with the Executive Chef and Compliance Officer indicated that the challenge is less technological and more behavioural. In a fast-paced, physically demanding kitchen, even a well-designed system will fail if it does not align with the rhythm of work (Yiannas, 2009). This recognition shaped the central inquiry of the thesis: How can food safety compliance be embedded within the everyday operations of Basement Chefs at RAI Amsterdam?

The study therefore investigates compliance at three levels: behavioural (individual), structural (organisational), and contextual (environmental). It examines not only what is done, but also why tasks are skipped, how responsibility is distributed, and how workflows either support or undermine compliance. Rather than framing non-compliance as a matter of enforcement or knowledge gaps, it is treated as a situated behaviour (Nielsen et al., 2025), shaped by identity, team coordination, and environmental fit.

Adopting a qualitative, exploratory approach grounded in behavioural and strategic design, the thesis aims to generate insights that move beyond surface-level fixes. The goal is to inform strategies that are sustainable and human-centred, and that can work under the real-time pressures of hospitality kitchens.

Instead of rushing to fix adoption, I needed to slow down and ask why it wasn't working.

1.3.2 Research Scope

This research is scoped to three core kitchen environments within RAI Amsterdam's food service operations: the hot kitchen, cold kitchen, and staff restaurant. While the broader aim is to support sustainable compliance practices across event-based and flex-staff contexts, the study begins in these settings for three key reasons:

First, the research adopts a behaviour-first approach. In event environments, compliance failures are often masked by operational urgency, fragmented roles, and transient staffing. In comparison, the selected kitchens offer more consistent team compositions and shift timings, making it possible to directly observe how compliance behaviours are initiated, distributed, maintained, or neglected over time. Their predictability allows the researcher to identify behavioural and contextual friction points, observe informal norms and peer dynamics, and trace how routines evolve. These insights provide a necessary foundation for designing behavioural interventions (grounded in practice) before addressing more volatile environments.

Second, the selected kitchens reflect a diverse cross-section of RAI's food service system, encompassing varied workflows, staff compositions (Core and Flex), and compliance responsibilities. This organisational diversity does not imply statistical generalisability, but it does support analytically transferable insights (patterns, frictions, and cultural dynamics) that can inform how compliance is understood and enacted across different operational contexts.

Third, the scope is guided by practical feasibility and methodological depth. Given the project's 100 working day timeline, these kitchens provide the conditions necessary for access, continuity, and sustained presence in the field and repeated interactions with participants over time. This is essential for ethnographic observation (to surface tacit behaviours and localised workarounds), co-creation workshops (which require trust and rapport), and iterative prototyping (which depends on regular feedback and embedded participation) (Van Boeijen et al., 2020; Sanders & Stappers, 2012). Such conditions are difficult to guarantee in quick turnaround event settings.

Importantly, the goal is not to assume that behaviours in production kitchens will replicate those found in event environments. Rather, this research aims to surface underlying behavioural factors, such as how compliance is prioritised, how responsibilities are negotiated, and how accountability emerges in team practice. These findings will inform the design of interventions that can later be tested and adapted to event-based contexts, where the pressures, constraints, and behaviours may be quite different. In this sense, the research provides a foundation for understanding variation, rather than a model for replication.

Based on this scope, the project aims to:

- Map behavioural patterns and dynamics that influence compliance practices across different roles and production kitchen environment
- Identify organisational and/or contextual frictions that hinder consistent compliance
- Reframe compliance, not as a top-down checklist, but as a shared, team-owned shared practice
- Generate insights to guide a strategic roadmap for embedding sustainable compliance in kitchen operations
- Provide a foundation for scaling behavioural interventions to flex-staff settings, where compliance is more vulnerable but equally critical

Positioning the research this way meant seeing compliance as something lived, not just documented.

Explaining research scope to chefs meant showing them how their daily work connects to the bigger picture.

1.4.1 Main Research Question

This study frames compliance across three analytical levels: micro (behavioural), meso (structural), and macro (environmental). Drawing on transition design research, where Peeters, Tromp, and Hekkert (2025) stress the value of connecting individual, organisational, and systemic perspectives, compliance is treated as a phenomenon shaped across interacting levels. Rather than testing fixed hypotheses, the inquiry is iterative—examining, questioning, and reframing as insights emerge.

What behavioral, organisational, and contextual factors contribute to the postponement or omission of food safety compliance tracking by kitchen staff, despite awareness of food safety?

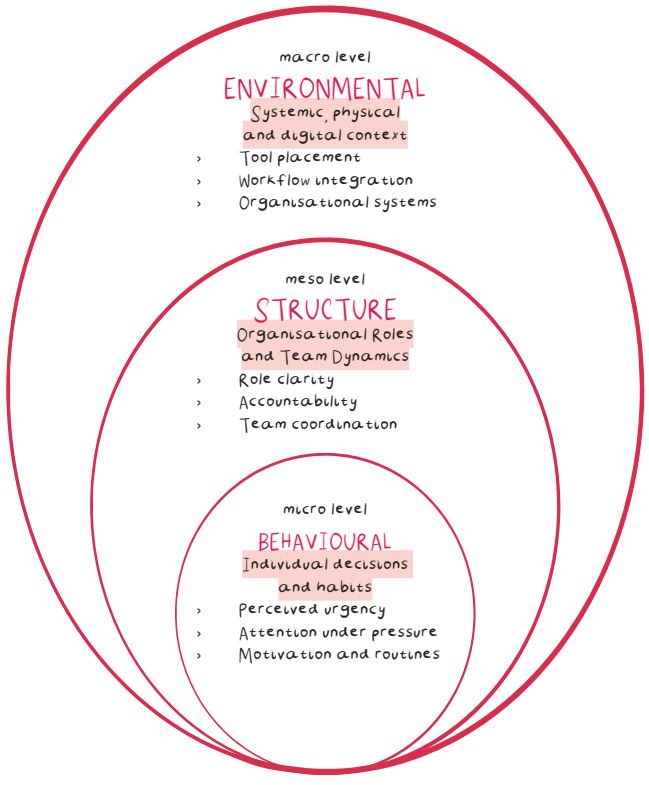


Figure 5. Nested levels shaping compliance

1.4.2 Sub-Research Questions

To address the main question, the study investigates three interconnected dimensions of compliance. These sub-questions are intended as guiding frames that allow the inquiry to unfold iteratively, acknowledging that insights may shift as the research progresses.

1. **How does the perceived urgency of compliance tasks influence whether staff prioritise or postpone them under pressure? (Behavioural level)**
   Drawing from theories such as COM-B (Michie et al., 2011) and Dual-process theory (Kahneman, 2011), this framing acknowledges that in high-pressure kitchen environments, immediate, visible outcomes (such as food production) often take precedence over tasks that feel less urgent, making compliance vulnerable to omission.

2. **How do role definitions and accountability practices shape ownership of compliance tasks? (Structural level)**
   In RAI's kitchens, fluid staffing and informal negotiations of responsibility often create ambiguity around who is expected to log checks. This diffusion of responsibility can reduce ownership and consistency in task execution.

3. **How do the physical and digital placement of compliance tools affect whether compliance tasks are carried out? (Environmental level)**
   Compliance systems, even when digitised, may be misaligned with the workflow. Distance to a logging station or friction in navigating an app introduces barriers that reduce task completion, even among motivated staff.

Choosing this structure helped to align the different expectations from theory, and from the kitchen 'practice'

Together, these sub-questions offer a flexible framework for examining compliance across micro (behavioural), meso (organisational), and macro (environmental) levels. The aim is not only to see whether compliance occurs, but to uncover why it does—or does not—take root in everyday practice (Peeters et al., 2025).

1.5 Research Approach

1.5.1 Rationale for Research Approach

Given the nature of the kitchen being fast-paced and team-driven, the research needed a method that could respond to the specific context and behaviours in the moment. A fixed or step-by-step research plan would have risked overlooking how the problem changes over time. Focusing only at behaviour level might have risked prioritising too much on individual awareness, while being more solution-focused could have ignored deeper structural or cultural issues. Hence this research uses an approach that allowed for ongoing framing and reframing of the problem, guided by behavioural insights and shaped by what was happening on the ground.

1.5.2 Positioning the Research Approach

Rather than treating food safety compliance as a fixed procedural gap, the research understands it as a situated behavioural phenomenon, shaped by dynamic interactions between individuals, systems, roles, and contexts.

The initial framing of the problem: flex staff not consistently executing compliance tasks, was treated not as a hypothesis to be confirmed, but as a starting point for iterative exploration. Following Dorst's notion of reframing (2015), the research adopted an abductive and exploratory approach, allowing new understandings of the problem-solution space to emerge through cycles of field engagement, reflection, and prototyping. In line with Nielsen et al. (2025), reframing here is not simply a conceptual tool but a design method to interrogate and expand the assumptions embedded in both problem and intervention definitions. This was necessary to avoid premature narrowing of the solution space and to mitigate the risk of designing for superficial behavioural symptoms rather than their root causes.

To support this process, the research follows a qualitative research structure organised into five iterative phases:

- Understanding Context: in-context observations and interviews to explore current behaviours and meanings
- Defining the Behavioural Space: identifying patterns, frictions, and motivations across settings
- Designing Interventions: co-creation with staff to surface alternative framings and generate behavioural nudges
- Testing in Context: small-scale prototyping to test interventions-in-practice
- Developing a Behaviour Change Strategy: synthesising learnings into a strategic roadmap

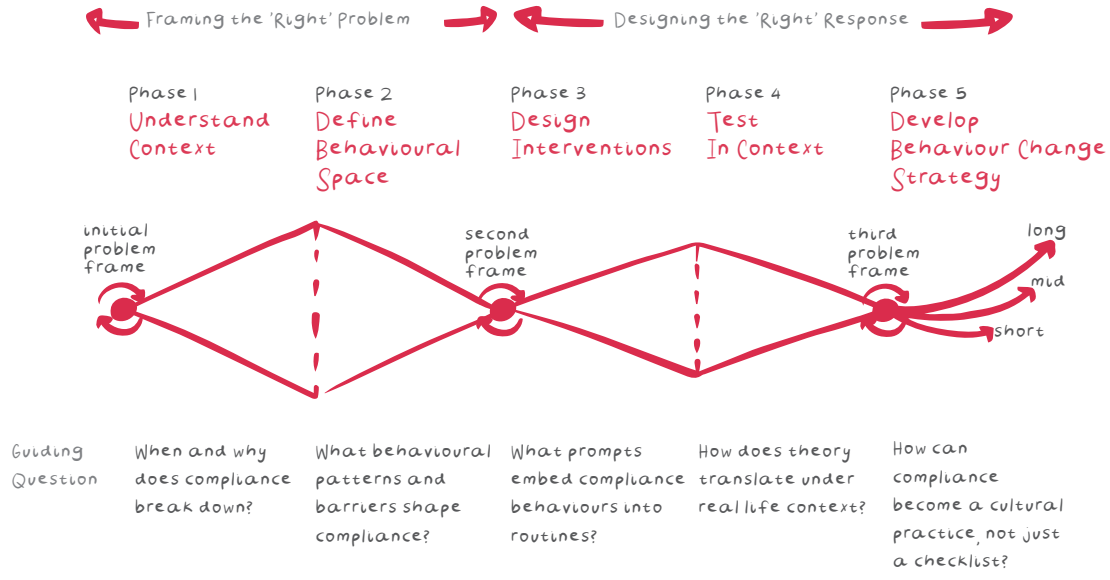


Figure 6. Design Process

1.5.3 Research Design & Process Overview

The research was structured as a five-phase, iterative process combining strategic design methods with behavioural theory to investigate compliance in practice. An adapted Double Diamond model (Design Council, 2005) guided the alternation between divergent (exploratory) and convergent (synthesising) activities.

The process was intentionally flexible. Each phase was designed to surface insights, challenge assumptions, and enable reframing, keeping the study open to what emerged in the field. Rather than aiming for definitive answers at each step, the framework provided a scaffold for inquiry, helping to explore how compliance could be understood, where breakdowns occurred, and what forms of intervention might be possible.

Reframing became my way of keeping all actors aligned without forcing one definition.

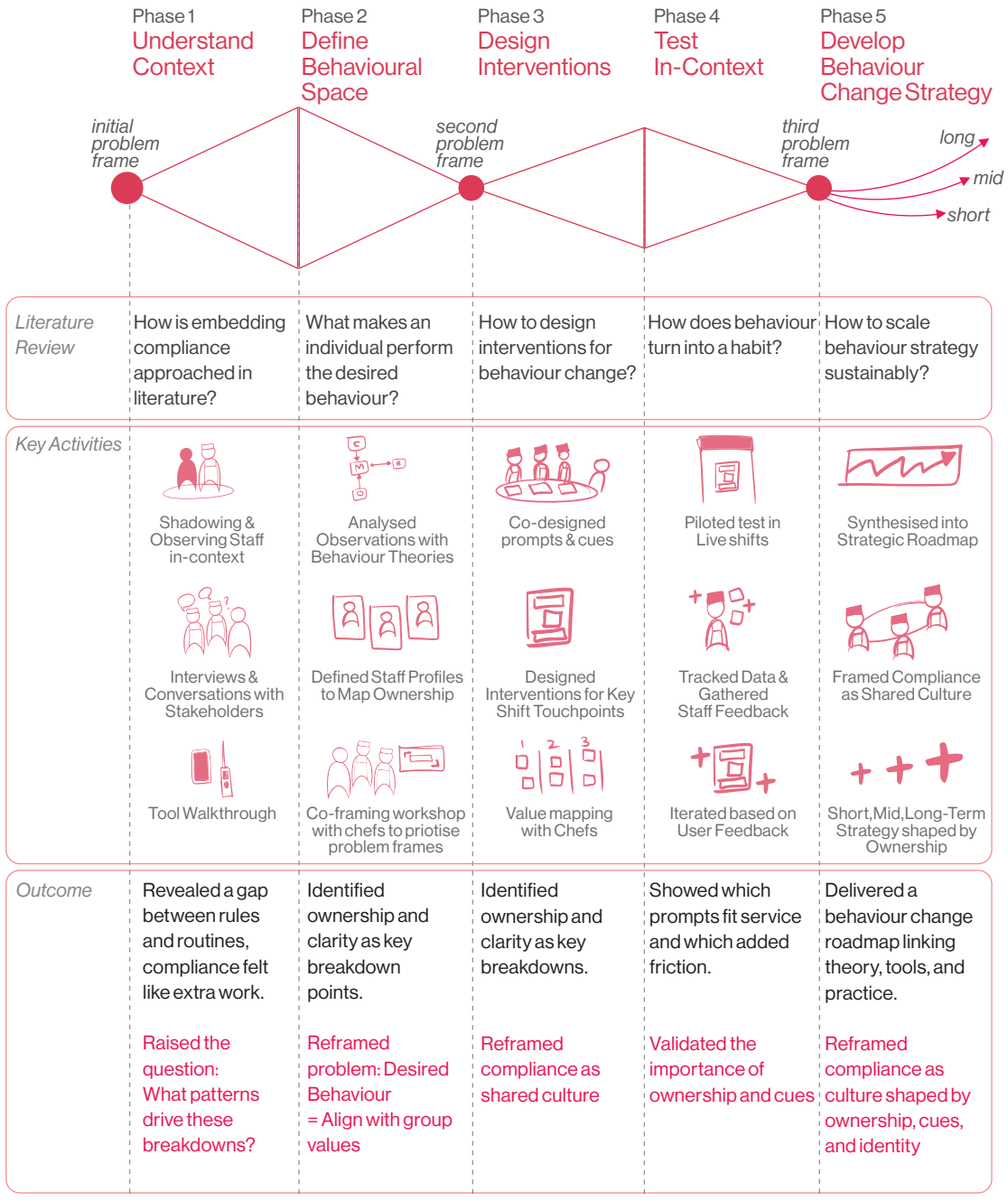


Figure 7. Design Process with Key Activities and Outcomes

Phase 1: Understand the Context

This phase was designed to explore the daily realities of compliance in kitchen operations. Through immersion and observation, the aim was to reveal routines, dynamics, and workarounds as a foundation for reframing the problem.

Phase 2: Define the Behavioural Space

Here, observations were interpreted through behavioural theory (e.g., COM-B). The purpose was to map patterns, drivers, and barriers of compliance, moving from raw insights toward structured frames of understanding.

Phase 3: Design the Intervention

In this phase, participatory workshops and value mapping sessions were used to generate intervention concepts. The intention was not to deliver final solutions, but to create exploratory prototypes aligned with staff needs and contexts.

Phase 4: Test in-Context

Prototype ideas were piloted in live shifts to examine how they interacted with existing workflows. This phase emphasised learning from real-world use: surfacing frictions, adoption patterns, and opportunities for reframing.

Phase 5: Develop Behaviour Change Strategy

The final phase synthesised insights into a forward-looking strategy. Rather than prescribing rules, the aim was to align behavioural intent with organisational practices, producing a roadmap that could guide sustainable compliance efforts over time.

1.5.3 Research Methods and Tools

The methods were chosen for their ability to engage with real-time, context-specific behaviour and to support an iterative process of framing and reframing across five phases. Instead of following a rigid protocol, tools were adapted to the pace of the kitchen, input from stakeholders, and constraints in the environment. The approach combined ethnographic observation, behavioural modelling, co-design, and in-context testing, all grounded in behavioural theory.

Field Observation and Immersion

Shadowing in the hot kitchen, cold kitchen, and staff restaurant was used to observe routines as they unfolded. Tool walk-throughs helped document both visible actions and less formal workarounds.

Informal Interviews and Conversations

Conversations were held in-situ with chefs, team leads, and support staff. Kept unstructured, these exchanges allowed participants to share reflections in the flow of work, anchoring insights in their lived reality.

Behavioural Mapping and Modelling

Frameworks such as COM-B, the Integrated Behaviour Model (IBM), and the Engagement Loop informed how behaviours were clustered and interpreted. These models provided a structured way to connect observations to behavioural dynamics.

Co-Creation Workshops

Workshops with staff and leadership were used to explore values, surface barriers, and generate possible directions. One session focused on framing the problem, the other on generating concepts. Together they helped ensure proposed directions remained both culturally relevant and operationally feasible.

Prototyping and In-Context Testing

Low-fidelity interventions were trialled in the kitchen to see how they interacted with existing routines. Testing emphasised usability, interpretation, and responsiveness under real pressures, allowing for quick adaptation.

Sense-check Meetings

Regular sense-check meetings with RAI stakeholders and/or TU Delft supervisory team were used to validate emerging insights and surface blind spots. These reflections followed an implicit What? So what? Now what? structure, functioning as methodological checkpoints for alignment and reframing.

Thematic Synthesis and Reframing

Insights from fieldwork, interviews, and workshops were clustered and interpreted using behavioural framing. Reframing was treated as both a design principle and a method—ensuring the research remained open, critical, and aligned with an evolving understanding of the problem.

The challenge was keeping methods light enough to fit the kitchen's pace while still collecting depth.

1.5.4 Ethical Considerations

Given the situated, live nature of this project, ethical practice extended beyond formal approval into continuous, context-sensitive judgement. The study took place in a real organisational environment, with staff operating under time pressure and embedded hierarchies. Ethical concerns therefore included not only consent and privacy, but also voluntariness, power relations, and trust.

Ethical Approval and Consent

All participants were informed of the study's purpose, scope, and voluntary nature. Consent was obtained for observations, conversations, and participation in workshops. For informal or shift-based interactions, verbal consent was supported by ongoing transparency and the option to withdraw at any time. To reduce the risk of perceived obligation, participants were explicitly assured that non-participation would have no consequences for their role within RAI Amsterdam.

Minimising Disruption

Research activities were coordinated with RAI Amsterdam to fit within staff schedules and avoid interfering with operations. Observations were non-intrusive, and workshops or interviews were agreed in advance with team leads. Where possible, methods were embedded in existing routines to avoid unnecessary demands on staff.

Data Handling and Anonymity

Data included interview recordings, photos, and workshop materials. All materials were anonymised, with no personal identifiers (names) retained. In line with TU Delft's data policy, anonymised data underlying the thesis will be archived in the TU Delft Repository. Sensitive organisational details were generalised in reporting to avoid disclosure risks.

Positionality and Reflexivity

The researcher occupied a hybrid role—both participant-observer and intervention designer. Reflexivity was therefore central: interpretations of behaviour were cross-checked with behavioural theory, participant feedback, and supervisory input to reduce bias. Special care was taken to distinguish between patterns emerging from theoretical framing and those observed in practice.

Commercial Sensitivity and Trust

Because compliance processes touch on internal business practices, care was taken to anonymise and generalise insights before reporting. Trust was treated as an ongoing ethical responsibility, maintained through open dialogue with staff, supervisory oversight, and alignment with RAI Amsterdam stakeholders.

We began by stepping into the kitchens of RAI Amsterdam, where compliance was visible on paper but fragile in practice.

Staff knew the rules, but the rhythm of service often pushed logging aside. This raised a central question: if awareness is not the problem, what is? To answer this, we turn to theory — to see how compliance has been studied, and where knowledge still falls short.

Chapter 2

Literature Review

This chapter reviews how food-safety compliance has been defined and studied across procedural, cultural, and behavioural perspectives. It highlights the persistent gap between awareness and action, evaluates behavioural models such as COM-B and IBM, and identifies key gaps that shape the study's theoretical stance.

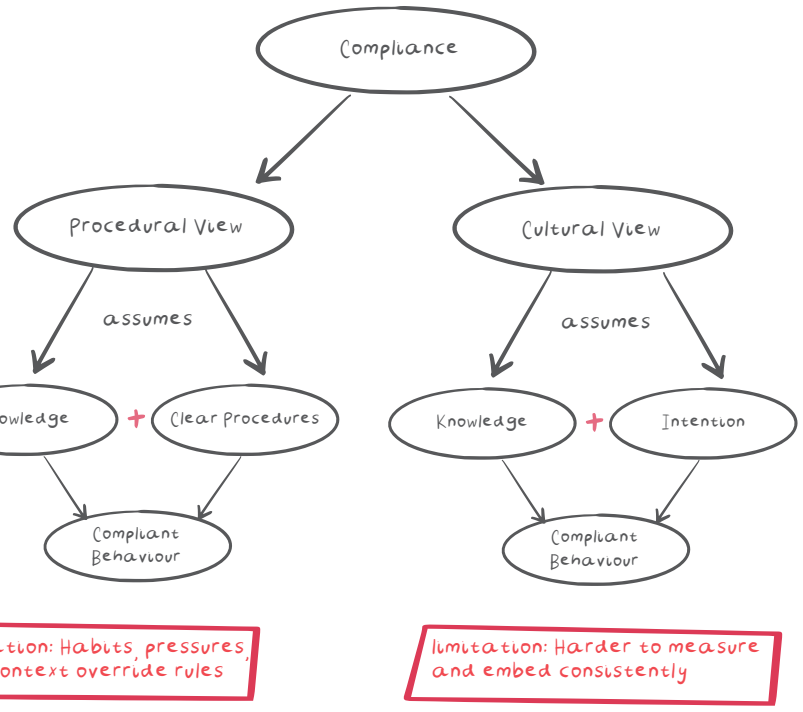
2.1 Evolving Definitions of Compliance in Food Safety

Compliance in the context of food safety is broadly defined as adherence to established laws, industry standards, and internal procedures (Panghal et al., 2017). These include statutory regulations such as HACCP, ISO 22000, and BRC, as well as company-specific protocols (Manning, 2018a). The compliance process typically follows a sequential, cyclical model in which firms first become aware of a regulation, interpret it, decide whether to comply, and then monitor implementation (Henson & Heasman, 1998). Despite this common foundation, the literature shows significant variation in how compliance is understood and applied.

One stream of research takes a procedural view, where compliance is treated as task completion, checklists, and inspections. In this framing, compliance is essentially the verification of whether rules and SOPs are followed (Manning, 2018b). This perspective assumes that providing knowledge and clear procedures should naturally result in compliant behaviour. Powell, Jacob, and Chapman (2010) argue that this assumption is problematic because knowledge and protocols alone do not ensure safe practice. For example, posting hand-washing signs or delivering formal training produced limited change, since behaviours were still driven by habits, cues, and workplace pressures. Similarly, food safety audits often scored highly on documented "purpose" (policies and standards) but showed weaker performance in "process" (day-to-day practice), highlighting the gap between written compliance and lived behaviour.

A second stream of research frames compliance as part of food safety culture. Here, compliance is seen as shaped by shared values, norms, and practices that go beyond training or auditing (Griffith et al., 2010; Powell et al., 2010; York, 2021). This perspective challenges the idea that rules or knowledge transfer alone can secure safety. Instead, it emphasises leadership, team motivation, and identity as critical drivers of behaviour. Accountability infrastructures: formal and informal mechanisms that link actors to compliance outcomes are found to mediate how regulations are enacted on the ground (Huising & Silbey, 2021). Powell et al. (2010) conclude that knowledge alone is not sufficient, and that effective compliance depends on cultural and contextual alignment that keeps the routine aspects of food safety relevant in practice.

This contrast between compliance as protocol and compliance as culture frames the central challenge addressed in this thesis. Rather than treating compliance as a fixed outcome of training or audits, the research approaches it as a situated behaviour shaped by behavioural, organisational, and environmental factors that interact within the dynamics of the kitchen.



Is compliance lost in the gap between knowledge and intention?

Figure 8. Compliance as protocol versus compliance as culture (Derived from Literature Review)

2.2 The Compliance – Behaviour Gap

Despite formal systems, training programmes, and regulatory requirements, a persistent gap remains between what people know about food safety and what they actually do in practice. This is often described in the literature as the performance gap: the difference between intended compliance and observed behaviour (Manning, 2018a; York, 2021). While staff may understand protocols and even intend to follow them, real-world conditions frequently disrupt consistent execution. For example, the provision of hygiene training or the posting of handwashing signage does not reliably improve behaviour, as staff often revert to ingrained habits under pressure (Powell, Jacob, & Chapman, 2010). Similarly, audits frequently score highly on documented "purpose" (policies and standards) but show weaker results in "process" (everyday practice), pointing to a gap between what is prescribed and what is enacted (Griffith et al., 2010).

These findings suggest that compliance cannot be assumed simply because protocols exist or because knowledge has been transferred. Researchers increasingly point to the role of attitudes, habits, and environmental factors in shaping this gap. While knowledge is a prerequisite, it is not sufficient on its own. Workers may value food safety and intend to act accordingly, yet contextual pressures, such as time scarcity, workload, or poorly designed tools often override those intentions (Yinnais, 2009). In this sense, the compliance–behaviour gap reflects the interaction between individual cognition, team dynamics, and situational constraints.

This gap challenges the assumption that compliance is merely a matter of training or enforcement. It highlights the importance of understanding compliance as a situated behaviour, influenced not only by individual awareness but also by the cultural and environmental conditions in which work takes place. To better explain why this gap persists, and how it might be addressed, researchers have turned to behavioural models that break down the determinants of behaviour beyond knowledge alone. These models are introduced in the following section.

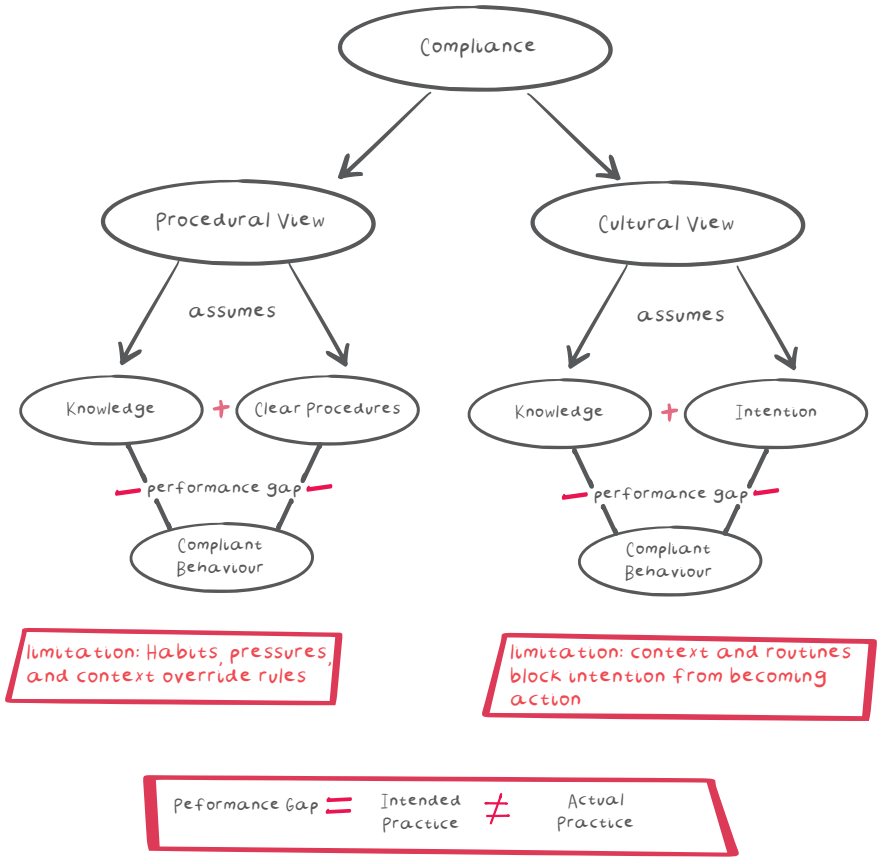


Figure 9. Compliance Views and Their Limits:
The Gap between Intended and Actual Practice (Derived from Literature Review)

If compliance is both known and intended, what makes it collapse in practice?

2.3 Behavioural Models and Theories of Change

2.3.1 Beyond awareness: why intention alone is not enough

The Theory of Reasoned Action (TRA) explains behaviour as the direct result of intention. Intention is shaped by two factors: attitude toward the behaviour, which reflects whether a person evaluates the behaviour as positive or negative based on its outcomes, and subjective norm, which refers to the perceived social pressure from important others to perform or not perform the behaviour (Ajzen & Fishbein, 1980). TRA assumes that once intention is formed, behaviour will follow.

The Theory of Planned Behaviour (TPB) built on this by introducing perceived behavioural control (PBC), which refers to a person's sense of how easy or difficult it is to perform a behaviour given their resources, skills, and opportunities (Ajzen, 1991). Empirical work showed that PBC improves the ability to predict both intention and behaviour, especially when people do not have full control over their actions (Madden, Ellen, & Ajzen, 1992).

Although TPB addresses some of the limitations of TRA, both models remain focused on intention and assume behaviour is largely rational. They do not fully account for the role of habits, automatic responses, and environmental conditions (Weinstein, 2007). In high-pressure environments such as professional kitchens, routines, time constraints, and situational barriers often prevent intentions from being carried out (York et al., 2008). These limits show why intention alone is not enough to explain the compliance–behaviour gap.

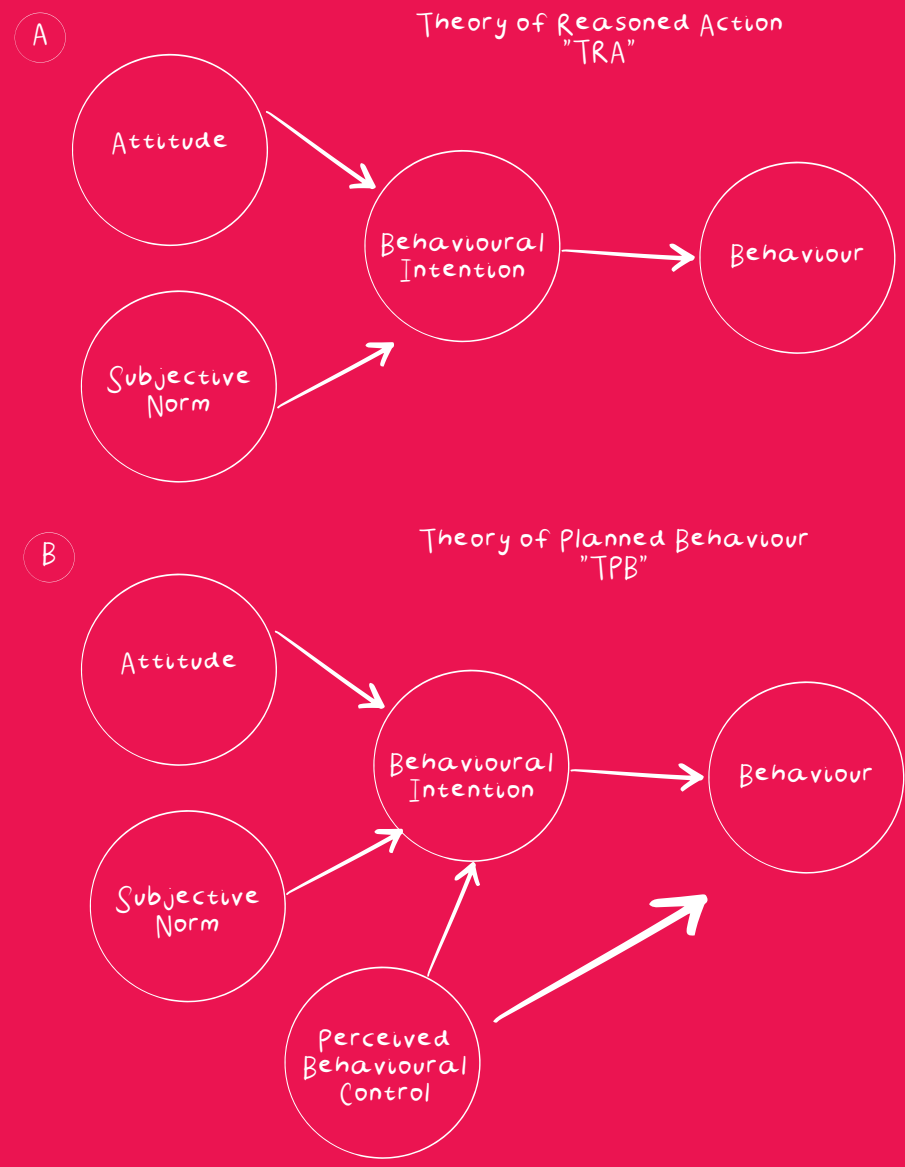


Figure 10. Path models of the Theory of Reasoned Action (A) and the Theory of Planned Behavior (B) illustrating the additional construct of perceived behavioral control in TPB (Madden, Ellen, & Ajzen, 1992)

2.3.2 Beyond Intention: The ABC Model

While intention-based models focus on cognitive processes, behaviourist perspectives emphasise the role of the environment. The ABC model (Antecedent–Behaviour–Consequence) explains behaviour as a sequence in which a cue or antecedent triggers an action, followed by a consequence that reinforces or discourages it (Miltenberger, 2011). In food-safety settings, for example, a handwashing sign can act as the antecedent, the act of washing hands is the behaviour, and praise from a supervisor or avoidance of reprimand functions as the consequence.

This framing highlights how compliance is often shaped less by internal motivation and more by situational cues and immediate outcomes. Studies in food safety confirm that environmental prompts (e.g., reminder signs) and reinforcement (e.g., praise or penalties) influence whether behaviours such as handwashing occur (Glanz et al., 2008). In this perspective, the gap between intention and behaviour reflects the absence or weakness of cues and consequences, rather than a lack of knowledge or awareness.

Although useful for identifying environmental drivers, the ABC model remains limited in scope. It focuses on stimulus-response chains and does not explain how cognitive, social, or cultural factors interact with these cues. In complex environments like professional kitchens, compliance cannot be reduced to antecedents and reinforcements alone. Behaviour is shaped by overlapping layers of intention, context, and habit, which cannot be captured by behaviourist logic alone (Weinstein, 2007).

This raises the need for frameworks that integrate environmental and cognitive perspectives, recognising that behaviour is produced through the interaction of knowledge, intention, and context. The following section introduces models such as COM-B and the Integrated Behavioural Model (IBM), which offer a more comprehensive foundation for understanding compliance in practice.

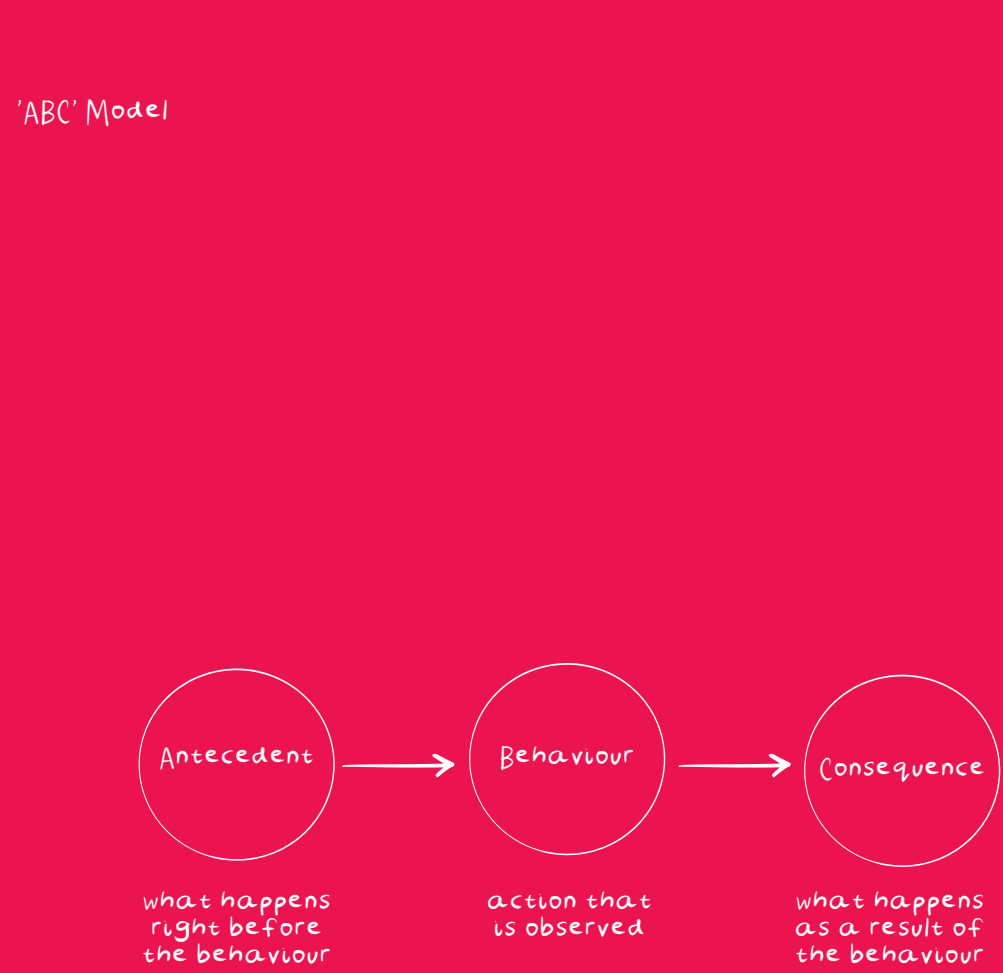


Figure 11. ABC model.
Adapted from Yiannas (2009, Figure 8.1).

2.3.2 Towards More Comprehensive Frameworks

Intention-based theories such as the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB) treat attitudes and subjective norms as the primary antecedents of intention; TPB additionally includes perceived behavioural control as a determinant of both intention and behaviour (Ajzen & Fishbein, 1980; Ajzen, 1991). Whereas, the ABC sequence (Antecedent > Behaviour > Consequence) shows how a stimulus can trigger a response that is followed by a consequence, but it does not specify how individual capacities or motivations interact with environmental conditions (Miltenberger, 2011).

More recent frameworks combine these perspectives. The COM-B model defines behaviour as the interaction of three components: Capability (psychological and physical capacities required to act), Opportunity (social and physical environmental conditions that enable or prompt action), and Motivation (reflective planning/intention and automatic habit) (Michie, van Stralen, & West, 2011). Linked to the Behaviour Change Wheel, COM-B provides a structured method for diagnosing barriers and selecting appropriate intervention functions. In compliance settings, this means that even when staff possess the knowledge and intention to log checks, constraints such as time pressure, limited tool access, or competing priorities can prevent follow-through.

COM-B Framework

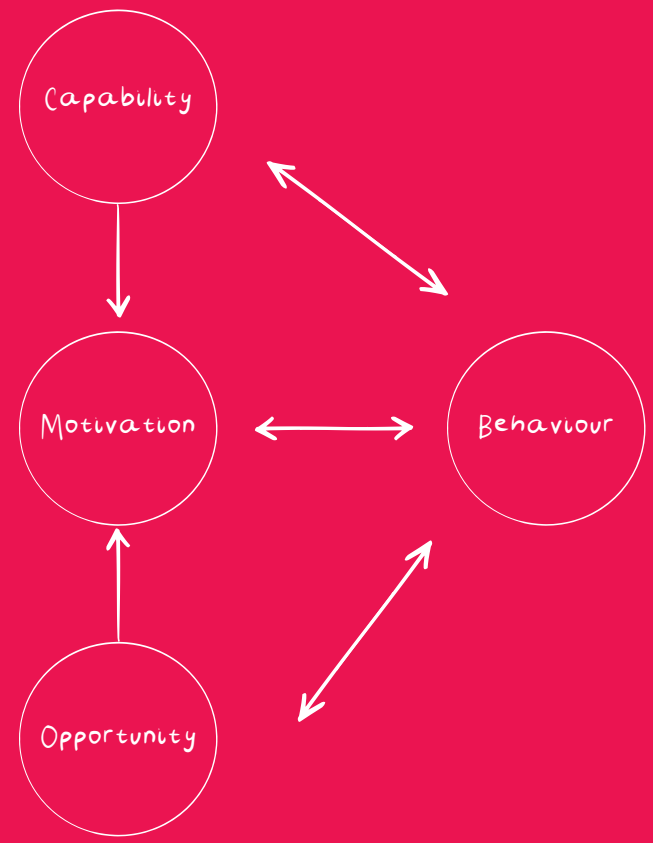


Figure 12. The COM-B Frameowrk (Michie et al., 2011)

2.3 Behavioural Models and Theories of Change

The Integrated Behavioural Model (IBM) builds on TRA and TPB while expanding their scope. IBM retains intention as a mediator but adds direct pathways from several psychosocial constructs to behaviour (Nielsen, Daalhuizen, & Cash, 2021). It distinguishes instrumental attitudes (cognitive evaluations of outcomes, e.g., “temperature logs reduce spoilage”) from experiential attitudes (affective reactions, e.g., “logging checks feels tedious”). It also separates injunctive norms (perceived social pressure, e.g., “my head chef expects it”) from descriptive norms (perceptions of typical practice, e.g., “most cooks log temperatures”).

IBM conceptualises personal agency as the joint inclusion of self-efficacy (confidence in one’s ability) and perceived behavioural control (awareness of external enablers or barriers), each measured separately. In addition, habit, salience, and environmental constraints are modelled as direct predictors of behaviour.

By integrating cognitive, social, and contextual determinants, IBM shows that compliance in high-pressure kitchens depends not only on knowledge and intention but also on routine habits, team norms and situational constraints. Used together, COM-B and IBM provide complementary value: COM-B offers a practical diagnostic lens for identifying barriers and linking them to interventions, while IBM explains how psychosocial and contextual mechanisms sustain or disrupt behaviour. This thesis applies both models to examine why staff postpone or omit compliance tasks despite awareness of food-safety requirements and to develop strategies for embedding compliance more effectively into everyday practice.

Here I was translating abstract behavioural theory into practical questions that could resonate with this particular reality of kitchen.

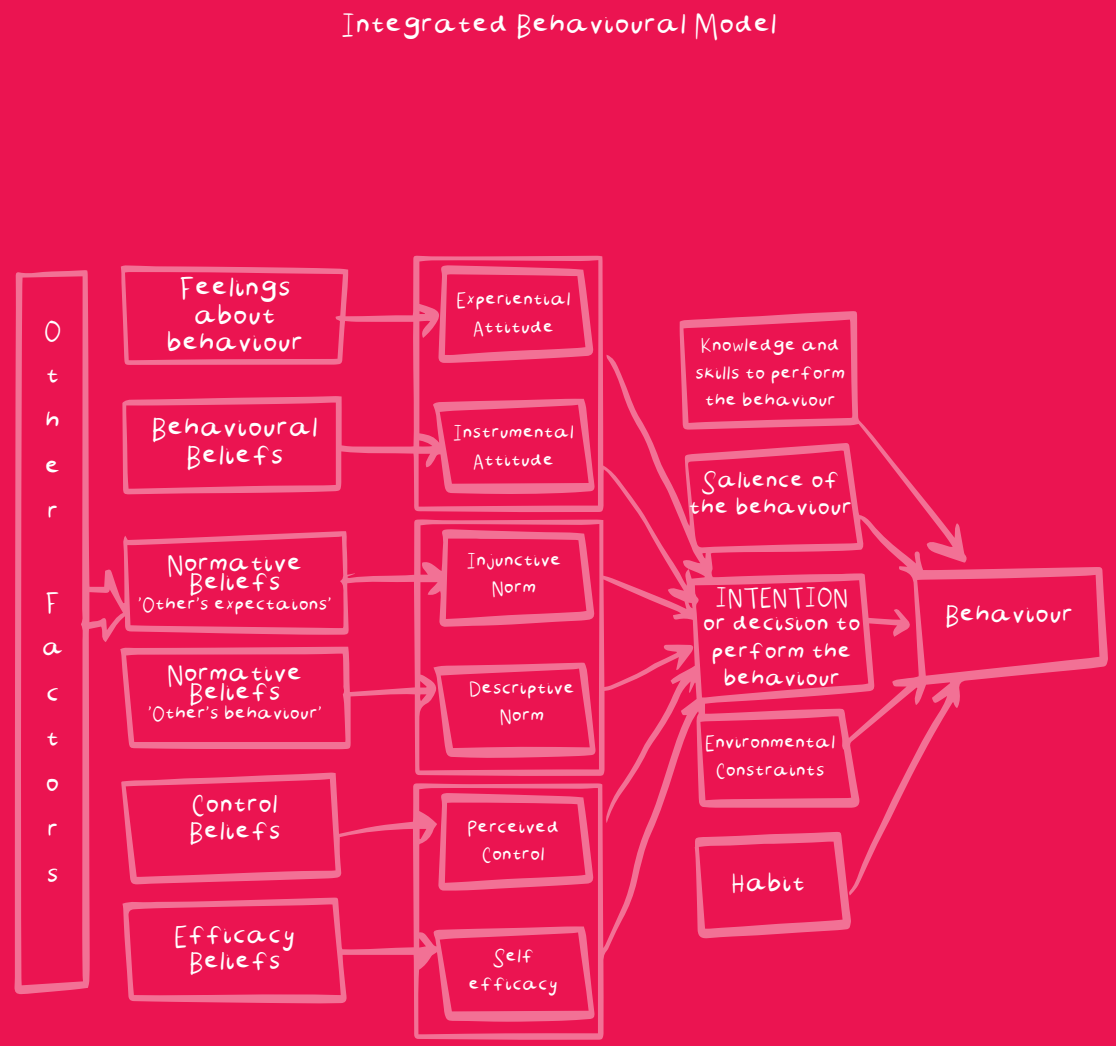


Figure 13. Theory of Reasoned Action, Theory of Planned Behavior, and the Integrated Behavioral Model (Montano & Kasprzyk, 2015)

2.4 Frictions and Barriers within Hospiltality Context

Hospitality kitchens operate under continuous time pressure, with staff juggling multiple tasks and responding to unpredictable service demands. In such environments, the urgency of production often takes precedence over formal food-safety routines (York et al., 2009). Research in restaurant and catering contexts highlights environmental barriers as strong predictors of non-compliance. Examples include hand-washing stations located far from work areas, thermometers that are unavailable or difficult to access, and documentation processes perceived as cumbersome (York et al., 2009; Yiannas, 2009). Even when employees receive training and are motivated, these physical and organisational constraints limit the feasibility of consistently performing the required practices (York et al., 2009; Yiannas, 2009).

High staff turnover and irregular staffing patterns further weaken compliance. Frequent turnover disrupts continuity, undermines accountability, and reduces the effectiveness of onboarding processes. Kitchen layout and task complexity add additional friction: poorly positioned equipment or hygiene facilities make routine checks less likely, especially during peak service (Yiannas, 2009). Consequently, systems that appear robust in policy often lose practical relevance in daily operations, becoming symbolic: acknowledged in principle but sidelined in practice. This creates a persistent performance gap between intended standards and enacted behaviour (Manning, 2018b; Yiannas, 2009).

2.5 Organisational and Cultural Barriers

Organisational culture and social norms are central to how food-safety compliance is understood and enacted (Powell, Jacob, & Chapman, 2010; Yiannas, 2009). When food safety is treated as a shared responsibility and leaders consistently model the expected behaviours, compliance becomes routine and internalised (Powell et al., 2010; Yiannas, 2009). In contrast, unclear role definitions and weak accountability create gaps where tasks are overlooked or passed on, as staff assume others will take responsibility (Yiannas, 2009).

Hospitality environments amplify these risks. High staff turnover and rotating crews disrupt knowledge transfer and weaken cultural consistency, reducing the likelihood that safe practices become embedded (Manning, 2018). Without structured reinforcement such as leadership visibility, peer role models, coaching, or feedback; employees are left without clear expectations or behavioural reference points, resulting in inconsistent standards (Powell et al., 2010; Manning, 2018). This contributes to the well-documented performance gap between intended and actual practice (Manning, 2018; Yiannas, 2009).

Leadership is a key enabler. York et al. (2009) found that the absence of managerial monitoring and reinforcement was one of the most frequently reported barriers to compliance, particularly in routine practices such as hand-washing and thermometer use. Team culture also matters: when staff feel psychologically safe to raise concerns or admit mistakes without penalty, engagement improves and long-term adherence to safety practices is strengthened (Yiannas, 2009).

2.6 Synthesis: Gaps and Implications for Design Practice

2.6.1 Synthesis

The literature shows that food-safety compliance cannot be reduced to knowledge transfer or written procedures. Across empirical and theoretical work, several recurring gaps explain why compliance often fails in hospitality settings.

First, a procedural-knowledge gap persists. Training and clear protocols do not automatically lead to compliant behaviour, as habits, time pressure and environmental cues frequently override intention. Studies find that even after training, staff omit checks such as hand-washing or thermometer use because ingrained routines and service demands dominate in practice (York et al., 2009; Yiannas, 2009; Manning, 2018a).

Second, a cultural-intention gap is evident. Staff may intend to follow rules, yet everyday routines, weak accountability and high turnover prevent these intentions from being enacted. Organisational culture—whether leaders model safe practices, whether staff feel responsible, and whether norms are reinforced—plays a decisive role in whether compliance becomes routine. This gap between intended and actual practice is consistently reported in the literature as the "performance gap" (Manning, 2018; Yiannas, 2009).

Third, environmental barriers emerge as critical constraints. Poorly placed hand-washing stations, insufficient thermometers, and complex documentation systems create friction that training alone cannot overcome (York et al., 2008; Yiannas, 2009). Kitchen design and ergonomics directly shape whether routine checks are feasible in high-pressure service windows.

Finally, an organisational-culture deficit weakens sustained compliance. Research shows that leadership visibility, managerial monitoring, and peer feedback are necessary to make food safety a shared responsibility. In their absence, compliance systems become symbolic—strong on paper but weak in practice (Powell, Jacob & Chapman, 2010; York et al., 2009; Manning, 2018).

These empirical insights are mirrored in the limitations of intention-centred theories such as TRA and TPB, which focus on attitudes, norms, and perceived control but fail to capture habits, cues, and situational pressures. More recent models (COM-B and IBM) provide a more complete account by linking capability, opportunity, motivation, social norms, habits, and environmental constraints (Michie, van Stralen & West, 2014; Nielsen, Daalhuizen & Cash, 2021).

2.6.2 Implications for design practice

Bridge intent–action gaps by embedding situational triggers at the point of need. Designers should create cues, ergonomic placements, and habit-forming artefacts that make compliance the path of least resistance (York et al., 2008; Yiannas, 2009; Miltenberger, 2011).

Address environmental and organisational frictions rather than relying solely on training. Applying COM-B and the Behaviour Change Wheel allows designers to diagnose barriers systematically and intervene through environmental restructuring, habit formation, and motivational supports (Michie et al., 2011; Powell et al., 2010; Manning, 2018a).

Embed compliance through multidisciplinary, iterative design. Sustained change depends on collaboration between designers, psychologists, anthropologists and front-line staff, with continuous prototyping and feedback loops. Leadership dashboards and peer-feedback systems can reinforce norms and strengthen safety culture (Nielsen et al., 2021; Powell et al., 2010; Manning, 2018b).

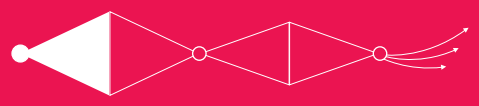
In sum, compliance is less about awareness than alignment between intention and action, systems and context, and organisational expectations and daily practice. If compliance breaks down between intention and action, then the task is to understand what drives that gap — a question this thesis now turns to.

The literature revealed a persistent performance gap: people intend to comply, but under pressure intention collapses into shortcuts.

Models like COM-B and IBM help explain why the gap exists, but in theory. To see how it plays out in reality, we need to step into the kitchen and watch actual behaviours as it happens in practice.

Chapter 3

Understanding Behaviour



This chapter examines how compliance operates in practice through fieldwork, shadowing, and informal interviews. Using IBM and COM-B as a lens, it maps behavioural frictions and identifies why compliance actions are performed but often not logged, surfacing systemic gaps in ownership, cues, and tool alignment.

3.1 Insights from Operations Leadership

To examine how compliance tracking operates in practice, fieldwork was in RAI's hot kitchen, cold kitchen, and staff restaurant. Methods included observation, shadowing staff during service, and informal interviews with kitchen staff, as well as semi-structured interviews with leadership chefs. These activities revealed how compliance tools were used or avoided, and how responsibilities were interpreted in daily work.

Since compliance depends on human behaviour rather than automated systems, observing routines in real time provided more accurate insights than relying on documentation or surveys. Embedding the researcher in the kitchen made it possible to identify patterns, frictions, and tacit knowledge that shape everyday practice (Sanders et al., 2012). The risk of influencing behaviour was mitigated by informal, sustained observation, which allowed staff to adapt to the researcher's presence.

Research activities were structured to minimise disruption in this high-pressure environment. Observations were non-intrusive, and interviews or workshops were scheduled around staff availability with approval from team leads. Where possible, data collection was integrated into existing workflows. Additional interviews and sense-check meetings with the Executive Chef and Compliance Officer provided organisational context and helped validate findings from the kitchen floor.

To contextualise the behavioural analysis, a semi-structured interview was conducted with two Operational Basement Chefs at RAI. These chefs hold leadership positions spanning both production kitchens and event catering operations. One of their responsibilities is to oversee the RMONI digital tracking app, monitoring which staff record compliance checks. While they do not complete the logs themselves, they are responsible for identifying lapses, intervening when breakdowns occur, and coordinating across teams to maintain operational standards. This oversight role positions them to observe where, how, and why compliance behaviours succeed or fail across different staff roles and settings.

3.1.1 Reliance on Individuals

The interviews revealed a strong dependency on individual initiative to ensure compliance logging occurs. Instead of being embedded in collective workflows, logging often depends on whoever happens to be attentive at the time. As one operations chef explained: **"If [lead chef] is not there, nobody's doing it."** This highlights the fragility of compliance when ownership is inconsistent and enforcement relies on informal vigilance.

The chefs also described the lack of built-in behavioural reinforcement within the system. As one noted: **"It's not really in the system. You always have to push them. Don't forget, don't forget."** This indicates that, although logging is formally part of protocol, it remains peripheral to daily practice, sustained more by reminders than by established habits or team norms.

3.1.2 Structural Gaps: Onboarding, Responsibility and Clarity

The chefs highlighted structural and cultural barriers to compliance, particularly among flex staff. Many temporary workers brought in for events or peak service periods were unfamiliar with the digital logging system. As one chef noted: **"Actually, I think RAI is one of the few who's doing it like this... digitally. So that's why they also are not used to it."** Despite this, formal onboarding was limited: **"There's not a real training for it... maybe we have to apply something... we didn't do it yet."** This lack of training reduced both perceived capability and readiness to use the system. Even when the tool was technically accessible, staff, especially flex workers often lacked clarity or confidence about when and how to use it. Responsibility was also diffused. Because logging was assigned per kitchen unit rather than per individual, accountability was difficult to trace, creating gaps in ownership.

3.1.2 Design Friction: Emotional Response

Tool design was also identified as a barrier. The RMONI interface uses red and green indicators to signal missed or completed tasks. According to the chefs, this created a punitive atmosphere rather than a supportive one. As one explained: **"If you get red, people get scared or feel like they made a mistake."** Instead of encouraging confident use, the colour scheme introduced pressure, as if users were being evaluated. This suggests that the interface reinforced compliance as a form of surveillance rather than embedding it as a shared routine.

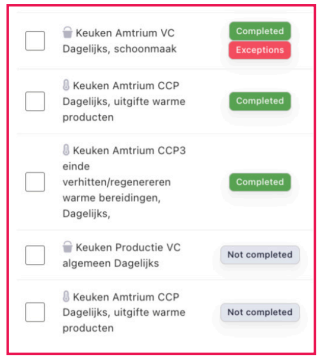


Figure 14. Red/Green Indicators in RMONI

3.1.3 Summary: Insights from Operational Leadership

The interviews with RAI's Operational Chefs showed that compliance issues are not primarily about awareness but about systemic and behavioural gaps. These included unclear responsibility, limited reinforcement, and design frictions in the digital tool. The findings indicate that compliance cannot be explained by surface factors alone and require analysis of the deeper behavioural determinants that shape whether logging occurs in practice. This provides the basis for applying the Integrated Behavioural Model (IBM) as a framework to map these determinants and better understand the observed gap between intention and action.

3.2 Applying IBM to Map Determinants of Action

To structure fieldwork, the Integrated Behavioural Model (IBM) was used as a practical map. Its determinants were translated into guiding questions for shadowing, conversations, and workshops. This ensured observations were not only descriptive but linked back to factors that influence whether intentions turn into action. The table below shows how each determinant was operationalised into questions and the type of data captured.

How it's used

- In fieldwork, these categories became prompts:
- When shadowing: note whether staff log in real time or postpone.
- In interviews: ask how they feel about logging (tedious vs meaningful).

In workshops: explore norms ("who usually does it?") and role ownership.

IBM Determinant	Guiding Question in Fieldwork	Data Capture Example
Instrumental Attitude	Do staff believe logging helps safety, reduces risk, or suppports the team?	Quotes about food safety value, spoilage prevention.
Experiential Attitude	Do staff experience logging as tedious, disruptive, or meaningful?	Complaints about RMONI app, logging seen as boring or like policing.
Injunctive Norm	Do chefs or managers explicitly expect staff to log?	Mentions of head chef expectations, compliance officers' reminders.
Descriptive Norm	What do staff see others actually doing around logging?	Comments such as "nobody bothers to log."
Perceived Control	Do staff feel they have time, tools, and clarity to log when needed?	Observations of delays due to tablet placement, lack of time, unclear steps.
Self Efficacy	Do staff feel confident their logging matters and counts?	Statements like "I don't think my input matters."
Environmental Constraints	What aspects of the environment layout, tool design, service pace, block action?	Notes on layout issues, clunky app interactions, time pressure during peak service.
Habit	Is logging tied to routine actions, or delayed or postponed?	Patterns of postponing checks until end of shift, skipping when busy.
Salience	Are there prompts or cues in the environment to trigger logging in the moment?	Notes on absence or visible reminders, or peer prompts.

3.3 Shadowing and Informal Conversations

To explore *how* compliance behaviours unfold in real-time, the researcher conducted shadowing across three core kitchen units at RAI Amsterdam: the hot kitchen, cold kitchen, and staff restaurant. These sessions took place over multiple shifts and were designed to capture how food safety tasks, particularly temperature and hygiene checks, logged via the RMONI system. Staff members were selected for observation based on recommendations from operational leadership, with an emphasis on including individuals who either consistently performed compliance tasks or were known to omit them. This purposive sampling enabled a comparative view of behavioural variation within the same operational setting. Shadowing focused on embedding within the natural flow of kitchen work, allowing the researcher to elicit tacit behaviours without interfering in routine tasks (Sanders and Stappers, 2012).

Given the time-sensitive and often fast-paced nature of the kitchen environment, opportunities for structured interviews were limited. Instead, the researcher engaged in informal, in-situ conversations with staff during quieter moments or transitions. These conversational exchanges enabled the collection of targeted insights in a manner that felt more natural and unobtrusive to participants. Staff were verbally informed of the research aims and assured that participation was entirely voluntary.

To guide observation, an "ideal" compliance journey was developed prior to fieldwork, based on the procedural expectations outlined in the HACCP handbook (Figure 3). This framework served as a behavioural reference point for identifying where compliance behaviours aligned with or deviated from protocol.

In shadowing chefs, I learned that meaning often sat between what was done and what was left undone. my task was to make sense of those gaps.

	Arrival & Preparation	Goods Reception	Goods Reception	Food Preparation	Cooking	Cooling & Storage
Timing	Daily/Start of Shift	Per delivery batch	Immediately post deliver	During all prep tasks	Per Food Batch	Post cooking, within 2 hours
Location	Changing Room/ Kitchen Entry Point	Receiving Dock/ Cold Staging Area	Cold Room/Dry Store/Freezer	Main Prep Area	Cooking line/Hot Kitchen	Cooling Room/ Blast Chiller
Responsible Actor(s)	All Staff/Entry Supervisor	Receiving Chef/ Logistics Support	Storage staff/line cook	Line Cook/Flex Staff	Chef de Partie/ Line Cook	Link Cook/ Steward
Sequential Actions	→ *Change into clean uniform and shoes* → *Remove jewelry and personal items* → *Wear hairnet/ headgear* → *Wash hands thoroughly before kitchen entry*	→ *Accept goods at loading dock* → *Measure temperature of chilled/ frozen goods* → *Inspect packaging, labels, and expiry* → *Reject and log non-compliant items* → *Verify allergen information (EBMS)*	→ *Store goods in designated zones (cold/frozen/dry)* → *Apply FIFO method* →Label items with date/time → *Log storage temperature*	→ *Seperate raw and cooked prep areas* → *Use colour coded tools* →*Sanitize surfaces pre/post use* → *Wash hands between tasks* → *Avoid cross-contamination* → *Track allergen contact zones*	→ *Cook food to required core temperature (>75°C or >60°C reheat)* → *Use calibrated thermometer* →*Clean thermometer between uses* → *Log measured temps* → *Avoid partial reheating*	→ *Cool food from 60°C to <7°C within 2 hours* → *Use shallow containers/ blast chiller* →*Label start/end time* → *Log cooling temperature and total cooling time*
CCP (Critical Check Points)	Hygiene check before kitchen entry	Delivery temperature and visual compliance	Correct storage zone and FIFO labeling	Cross contamination prevention	Core Temperature Control	Cooling & temperature compliance
Tools Required	Uniform, sink, soap, hygiene checklist	Thermometer, delivery log, rejection form, allergen info system	Labels, temperature log, storage containers	Color-coded tools, sanitizers, soap, gloves, allergen signage	Thermometer, cooking logbook, sanitizer wipes	Shallow containers, blast chiller, cooling log
Documentation	Hygiene checklist	Delivery temeprature log, rejection record, allergen log	Storage log, temperature records	Sanitisation checklist, allergen zone log	Cooking temperature log	Cooling record with time/temp

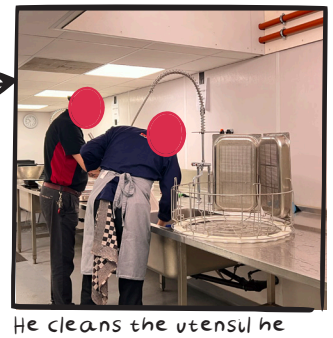
Figure 15. Visualised Ideal Compliance Journey (based on RAI's HACCP Handbook)

3.3 Shadowing and Informal Conversations

Lead chef unpacks packets of gnocchi to boil

He flat packs the boxes simultaneously

He runs upstairs as he is looking for an utensil



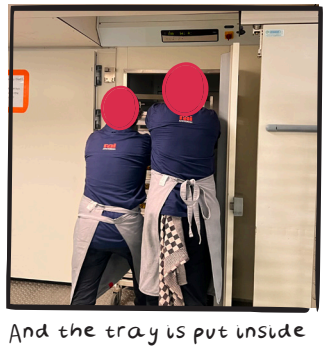
He cleans the utensil he was looking for

He comes back to the station to resume

Lead chef instructs the flex worker to flat pack

He cleans up his station as he goes

All prepped ingredients go in the tray



And the tray is put inside the blast chiller

Lead chef grabs these sanitising wipes

Sanitises the thermometer and connects to app via bluetooth

Measures the food temperature and the app records the data, chef adds additional notes and hits 'send'

Figure 16. Hot Kitchen Shadowing. Personal Photographs. 2025.

3.3.1 Hot Kitchen

The hot kitchen is one of RAI's core production units, preparing high-volume hot dishes for internal dining and large events. Its fast-paced, embodied, and highly coordinated environment creates conditions that make consistent digital-compliance logging difficult. Shadowing was carried out during a full-service shift with a lead chef identified by operations chefs previously as reliable in using the RMONI system.

The team during this shift consisted of the lead chef and two flex staff. The chef directed the flex staff in food preparation while simultaneously managing his own cooking tasks and monitoring their progress. At several points he left the kitchen to collect utensils from other areas, highlighting both the fragmented layout and the physical demands of the role.

Later in the shift the chef demonstrated the temperature-logging procedure: sanitising the thermometer, connecting it to RMONI via Bluetooth, recording the oven reading, and submitting it. He described the process as efficient **"as soon as I put it on send, it's in the computer, out of my hands. Very easy. I don't have to keep stickers"** but admitted that under pressure logging was often postponed: **"Sometimes, when I'm busy, I can forget it... and then I still can put something in."** This reflects the intention-action gap noted in behavioural theory, where intentions do not always translate into behaviour under situational pressures (Madden, Ellen, & Ajzen, 1992).

Observations showed that staff frequently substituted sensory judgements for measurement, for example checking by touch or elapsed time: **"People say, yeah, it's cold. Did you measure it? No, I did not."** Such heuristics are characteristic of fast-service environments where System 1 thinking, behavioural shortcuts dominate (Soman, 2015). Staff also created informal work-arounds, such as using freezer timers as reminders.

Role dynamics further limited compliance. Flex staff did not engage in logging, deferring responsibility to the lead chef. When asked about their role, one replied, **"I'm just helping you [lead chef] because you need help,"** and another said, **"I'm my own boss."** Although framed as comments on freelance status, these remarks reveal that flex staff see themselves as temporary assistants rather than accountable team members. The chef reinforced this division, stating, **"It's not their job."** This pattern aligns with literature showing that when responsibility is treated as an individual rather than a shared obligation, compliance weakens (Griffith, Livesey, & Clayton, 2010).

The lead chef described his role in centralised terms: **"I oversee the flavour... it's my duty."** While this centralisation sustains compliance in the moment, it leaves the system vulnerable in his absence. Across observations, logging was widely understood but frequently delayed, approximated, or bypassed. Although the RMONI system meets functional requirements, its adoption is misaligned due to the tempo, physical flow, and distributed responsibilities of kitchen work. Reframing research stresses that design solutions must fit the lived problem–solution space (Nielsen, Daalhuizen, & Cash, 2025).

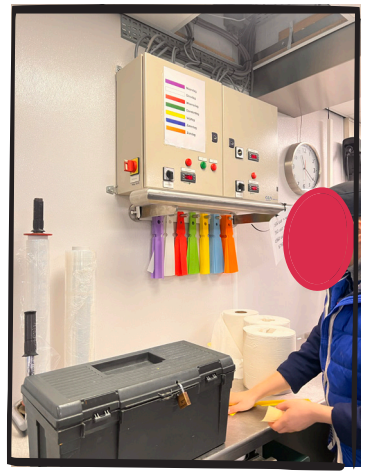
In sum, the hot kitchen shows how compliance depends on individuals rather than routines, making the system fragile under pressure. The next section examines whether similar patterns appear in the cold kitchen, where task tempo and staff composition differ (Griffith et al., 2010).

3.3.2 Cold Kitchen

The cold kitchen prepares dishes that require little or no cooking, complementing production in the hot kitchen. Staffing usually consists of a core team with occasional flex support. Because service tempo is lower, this setting offered a way to observe how compliance unfolded when time pressure was not the dominant constraint. Shadowing was conducted across full shift to examine how hygiene and cooling tasks were enacted and documented in RMONI.

COLD STORAGE AREA

'EMPLOYEE OF THE MONTH' RECOGNITION ON MANTLE



EACH LABEL COLOUR DENOTES A DAY

THE LABEL MAKER PRINTS INFO ON WHEN FOOD WAS PREPARED AND EXPIRY

Figure 17. Cold Kitchen Shadowing. Personal Photographs. 2025.

Note on Documentation

Unlike the hot kitchen, where the fast pace allowed photos to be taken with little disruption, the cold kitchen operated at a quieter tempo with staff working in close proximity. In this setting, photographing activities risked drawing attention to the researcher and influencing behaviour. For this reason, documentation focused on shadowing notes and transcripts rather than images.

Staff showed high awareness of compliance checks and general familiarity with the system: **“We use the app for cleaning. But there are not many things that we need to cool”.** Despite this, logging often did not follow the check itself. As one admitted, **“This morning I didn’t do it. I checked already, but I didn’t fill it in”** , illustrating the intention–action gap described by the Theory of Planned Behavior (Madden, Ellen, & Ajzen, 1992).

Responsibility for logging was managed informally. With several staff present, the assumption was that one person would take care of it: **“Here you are with five or six people in the whole kitchen. So if somebody does it, the other one doesn’t have to do it”**. While this distributed logic reduced duplication, it also created accountability gaps, a phenomenon linked to weak food-safety culture when roles are vague (Griffith et al., 2010). Logging often occurred out of sight, leaving others to assume it had been done.

Salience emerged as a recurring weakness. The app was not considered difficult **“It’s fine. Yeah. Not big of a deal... you just have to open it and do it”** but it lacked built-in prompts or triggers to integrate it into workflow. As one staff member put it, **“That’s why people forget... it just has to come in people’s system to look at it, or they get a notification or something”.** Without these cues, logging remained a cognitively effortful add-on, consistent with research on the importance of environmental cues for habit execution (Soman, 2015). Some staff compensated with their own reminders: **“I like to write things and put on the wall to make me remember... I get busy with things, and I forget, and then it’s the end of the day already”.**

Timing practices also shaped behaviour. Early arrivals often took on checks by default: **“Normally when I start at 7, I check. But if I don’t, it’s already done by someone else or forgotten”.** This **“first-in logs”** routine worked when reinforced, but when assumptions failed, tasks were missed: a pattern that reframing research warns can undermine habit stability unless design aligns with the lived problem-solution space (Nielsen, Cash, Daalhuizen, & Tromp, 2025).

Overall, the cold kitchen presented a setting where staff understood and intended to comply, but logging was inconsistently integrated into routines. Responsibility was diffused, salience was low, and compliance tasks risked slipping through the cracks. Compared with the hot kitchen, where speed dominated, the cold kitchen highlighted a different barrier: without strong cues or structured accountability, available time alone did not ensure follow-through. These findings echo the broader literature that technical tools must be embedded in a supportive food-safety culture (Manning, 2018) and that interventions combining training with barrier-targeted strategies improve compliance (York, et al., 2008).

3.3 Shadowing and Informal Conversations

start of shift

goods from delivery are checked and brought to store

Staff look through 'green book' for today's tasks

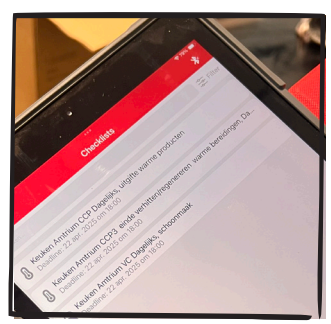
Prep begins

Suddenly realise one ingredient is in main kitchen

Also realise tablet is in main kitchen, asks peer to grab both things

Peer walks all the way across building to get ingredient and tablet

On return, the service has started thus prioritised



Post service, staff returns to log, but not sure what was the temperature anymore

Figure 18. Staff Restaurant Shadowing. Personal Photographs. 2025.

3.3.3 Staff Restaurant

The staff restaurant provides daily meals for internal employees and event staff. Unlike the production kitchens, it operates at a smaller scale and with a more informal rhythm, where prep, service, and cleaning tasks overlap across a compact team. During the observed shifts the regular crew was absent and the unit was run entirely by flex workers recruited through external staffing agencies. This created a distinctive context for examining compliance when stable routines or clear accountability structures are lacking.

3.3 Shadowing and Informal Conversations

Although the RMONI system was available, no compliance logging was observed. The omission did not appear to stem from negligence but from role ambiguity, fragmented continuity, and environmental friction. One staff member explained, **"I don't think he does like the compliance... it's the regular staff that does it"**, highlighting uncertainty about responsibility and the tendency to treat compliance as a task belonging to others rather than a shared obligation (Griffith et al., 2010).

Even among workers familiar with RMONI, logging was routinely deprioritised. A participant noted, **"Everything is safe... but because the kitchen gets busy, people don't actually track it".** Hygiene practices were performed but these checks were rarely documented, creating a disconnect between behaviour and recording reiterating the intention–action gap described by the Theory of Planned Behavior (York et al., 2009).

An episode illustrated the impact of environmental constraints. A chef measured food temperature, but the iPad required for logging was stored in the main kitchen all the way across the building; by the time it was retrieved, service had already started. Thus, service was prioritised and once it was over, when attempting to log, the chef asked, **"What was the temperature again?"** This sequence shows how low salience and memory recall lapse undermine follow-through when tools are not immediately, physically accessible (Soman, 2015).

The reliance on flex workers compounded these challenges. Many lacked familiarity with compliance tools or clarity on expectations. As a Sous-chef remarked, **"There are also staff who don't have the necessary background...freelancing for the money... it happens on big events...when a lot of people are required".** Without onboarding or reinforcement, staff defaulted to informal practices, leaving compliance dependent on the presence of specific individuals.

Overall, the staff restaurant exemplifies a compliance system that remains person-dependent rather than embedded as a routine norm. Logging is inconsistently performed, shaped more by assumptions and environmental barriers than by systematic reinforcement: a situation that behavioural-design research suggests can be mitigated by reframing tools to align with work-flow and by strengthening food-safety culture (Nielsen et al., 2025; Manning, 2018b).

3.4 Key Themes and Behavioural Frictions

3.4.1 Behaviour Frictions

Analysis of compliance behaviour across the three kitchen units was based on recurring patterns observed during three full shifts of shadowing and conversations with eight staff members. The accounts were clustered into higher-order themes and then linked back to behavioural frameworks. COM-B provided a simple structure (Capability, Opportunity, Motivation), while IBM helped specify the determinants within those categories (attitudes, norms, agency, constraints, habits, salience).

What emerged was clear: food-safety actions (cleaning, checking, cooling) were often performed, but logging them in RMONI was delayed, improvised, or abandoned. These drop-offs were systemic rather than exceptional, pointing to frictions in opportunity and motivation rather than capability.

3.4.2 Emerging Problem Frames

Role Ambiguity and Ownership Diffusion

Logging was nobody's clear job. It usually fell to the most diligent or senior chef, while others assumed **"someone else will do it."** As one participant explained, **"Here you are with five or six people in the whole kitchen. So if somebody does it, the other one doesn't have to do it."** This diffusion shows weak norms and low agency, leaving compliance fragile.

Framework link: IBM – Agency / Norms; COM-B – Opportunity (social).

Identity-Based Self-exclusion of Flex Staff

Across all kitchens, flex staff rarely engaged in compliance logging. Many positioned themselves as temporary helpers rather than accountable team members. Comments such as **"I'm just helping you [lead chef] because you need help"** or **"I'm my own boss"** illustrate this distancing. Such identity-based self-exclusion has been documented as a barrier to a strong food-safety culture (Yiannas, 2009).

Framework link: IBM – Agency / Attitudes; COM-B – Motivation (reflective).

By stepping back, I could let staff stories surface patterns of urgency, pride, and omission that no survey could reveal.

Sensory Trust Over System Trust

Staff often relied on embodied knowledge and heuristics rather than formal system checks. One chef explained, **"It [prepared food] was in 11:00, so it has been in there for 20 minutes... that's how I keep track"** Another admitted, **"People say, yeah, it's cold. Did you measure it? No, I did not".** This reliance on sensory cues, rather than documented verification, reflects the tendency to trust personal judgement over digital tools (Yiannas, 2009).

Framework link: IBM – Attitudes (experiential); COM-B – Motivation (automatic).

No Cue → No Habit

Logging lacked reliable prompts or reinforcement. Staff frequently described simply forgetting, with one summarising, **"Everybody forgets".** Another noted, **"I like to write things and put on the wall to make me remember... I get busy with things, and I forget, and then it's the end of the day already".** The absence of environmental cues prevents the formation of automatic habits, a relationship well-established in behavioural economics (Soman, 2015) and reinforced by reframing research that stresses cue-driven habit formation (Nielsen et al., 2025).

Framework link: IBM – Habits / Salience; COM-B – Motivation (automatic).

Tool–Workflow Misalignment and Feedback Friction

Although technically functional, RMONI often felt misaligned with kitchen workflows. Logging required pausing tasks, locating a tablet, or navigating an app mid-shift. As a chef put it, **"You just have to start... opening the app is the hardest part".** In the staff restaurant, a chef measured food temperature but could not log it because the iPad was stored in the main kitchen; by the time it arrived, service had already started. Tool friction was compounded by interface anxieties: **"There's red and green in the app... if you get red, people get scared or feel like they made a mistake".** Moreover, the lack of team-level feedback loops reduced motivation, turning logging into an individualised, often invisible

task: a problem highlighted in triangulation studies of food-safety culture (Griffith et al., 2010).

Policy–Practice Disconnect

A persistent gap existed between formal requirements and lived practice. Leadership expectations of **"everybody should log"** had not translated into shared norms. In the staff restaurant, where core staff were absent, logging collapsed entirely. Even when familiar with RMONI, flex staff deferred: **"It's the regular staff that does it".** This disconnect illustrates how compliance can remain person-dependent rather than culturally embedded, a pattern documented in hospitality-industry research on food-safety culture (Manning, 2018a).

Summary

Taken together, these themes illustrate not individual neglect but systemic misalignment. Safety actions were often performed but not logged; responsibility was present but unassigned; tools were available but unusable. The system lacked the behavioural scaffolding, structural reinforcement, and social distribution required to 'convert' intention into action. The analysis therefore surfaces critical leverage points for organisational intervention: clarifying roles, embedding cues, reducing tool friction, and reframing compliance as a shared cultural practice rather than an individual burden (Nielsen et al., 2025; Powell et al., 2010).

In summary, this directly answers the behavioural sub-question: urgency and workload consistently displaced logging, showing that staff valued safety but deprioritised it under pressure. Compliance was not a matter of ignorance, but of attention and capacity in high-demand contexts.

3.5 Summary of Synthesised Insights

Field Insight	COM-B	IBM	Field Evidence
Role ambiguity and ownership diffusion	Weak Opportunity, social	Diffused agency and inconsistent norms	"Here you are with five or six people if somebody does it, the other one doesn't have to."
Identity Based Self exclusion of Flex Staff	Weak Motivation, reflective	Low self efficacy and distancing attitudes	"I'm just helping you because you need help."
Sensory Trust over System Trust	Motivation, 'automatic' dominates reflective motivation	Experiential attitudes outweigh instrumental ones	"People say, yeah, it's cold. Did you measure it? No, I did not."
No Cue, No Habit	Weak Motivation 'automatic'	Missing habits and lack of salience	"I get busy with things, I forget, and then it's the end of the day already."
Tool Workflow Misalignment and Feedback Friction	Blocked Opportunity 'physical'	Strong environmental constraints	"Opening the app is the hardest part."
Policy Practice Disconnect	Uneven Opportunity 'social'	Gap between injunctive and descriptive norms	"It's the regular staff that does it."

Figure 19. Synthesised Insights in relation to COM-B and IBM

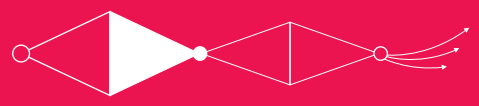
Fieldwork confirmed the gap is not about ignorance but about ownership, cues, and fit.

We saw actions performed but not logged, roles blurred, and tools misaligned with workflow. These scattered frictions now need structure.

The next step is to map the behavioural space: identifying staff profiles and patterns, and priorities that will guide design.

Chapter 4

Defining the Behavioural Space



This chapter develops staff behavioural profiles, runs a co-framing workshop with chefs, and identifies priority behaviours for intervention. The analysis reframes compliance breakdowns as systemic misfits rather than individual neglect, setting the stage for targeted design responses.

4.1 Emerging Behavioural Profiles

The previous chapters highlighted how compliance in hospitality kitchens cannot be explained by lack of knowledge alone. Literature pointed to the persistent performance gap between intended and enacted practice, while fieldwork at RAI revealed how this gap is shaped by diffused ownership, missing cues, and tool–workflow misalignments. To build on these insights, this phase of the research shifts from analysing frictions to mapping patterns of behaviour.

Rather than assuming that compliance failure is uniform or simply an individual training issue, the study examined how different categories of staff engaged with compliance in practice. Using shadowing, task walkthroughs, informal conversations, and interviews, five distinct behavioural profiles were identified. These profiles reflect variation in capability, opportunity, and motivation: key determinants of behaviour in the Integrated Behaviour Model (IBM) and explain why some staff logged compliance tasks consistently while others deferred responsibility.

The profiles do not serve as judgements of individuals, but as representations of how structural conditions, role perceptions, and workplace identities shape engagement. They demonstrate that compliance is not evenly distributed across staff categories: permanent staff often acted as anchors, while flex workers' engagement ranged widely depending on their role, tenure, and perceived responsibility. Recognising this diversity is essential for designing systems that align responsibilities with lived practice rather than abstract expectation.

Core Staff: Permanent employees with high capability and strong responsibility. Embedded in the organisational culture, they were familiar with protocols and often ensured tasks were completed. Yet this reliability sometimes produced over-responsibility, with one remarking: **"Even I forget it [compliance tracking] sometimes..."** a sign of ownership overload rather than neglect.

Legacy Flex Staff: Former core staff returning part-time post-retirement. Their long familiarity with RAI enabled proficiency and a sense of embeddedness, and at times they stepped in and behaved much like core staff, informally taking on compliance tasks. Yet this engagement was inconsistent. When instructions were unclear or signals from leadership were weak, they sometimes reverted to old routines, hesitating to assume full responsibility.

Contract Flex Staff: Chefs hired for fixed periods via external agencies. They generally performed hygiene tasks but rarely logged compliance unless explicitly directed. One admitted: **"I don't think I'm at that level of responsibility yet,"** illustrating that capability was present, but opportunity (onboarding, access) and motivation (role ownership) were weaker.

Freelance Flex Staff: Ad hoc hires who approached work with an instruction-based mindset. They prioritised core food-preparation tasks and saw compliance as outside their role. This produced a consistent gap between food-safety practice and its documentation.

Transactional Flex Staff: Event-based hires rotating across venues. Their tasks were limited to basic preparation or manual support, with little interaction with compliance tools. As one sous chef observed: **"There are people who really have no knowledge... freelancing for the money."** Rather than a deficit, this profile reflects structural reality: such staff are not positioned to take on compliance responsibilities. Designing systems that account for this profile by embedding logging in core or supervisory routines prevents unrealistic expectations.

Together, these profiles translate the abstract frictions identified earlier into concrete behavioural patterns. They reveal not only who takes responsibility but also why gaps emerge, providing a foundation for targeted design interventions in the next phase.

4.2 Co-Framing Workshop with Chefs

To build on insights from the shadowing phase, a co-framing workshop was conducted with four experienced chefs, two sous-chefs, and two chefs de partie. The purpose of this workshop was a collaborative reflection on how compliance tracking could be better aligned with the realities of kitchen work. The session combined structured and creative methods: a welcome and icebreaker, a "How-to" activity to frame key challenges, an energiser "illegal brainstorming" (Heijne & van der Meer, 2019) to expose system vulnerabilities, an ideation round (Crazy 8's), and matrix mapping to cluster and prioritise ideas.

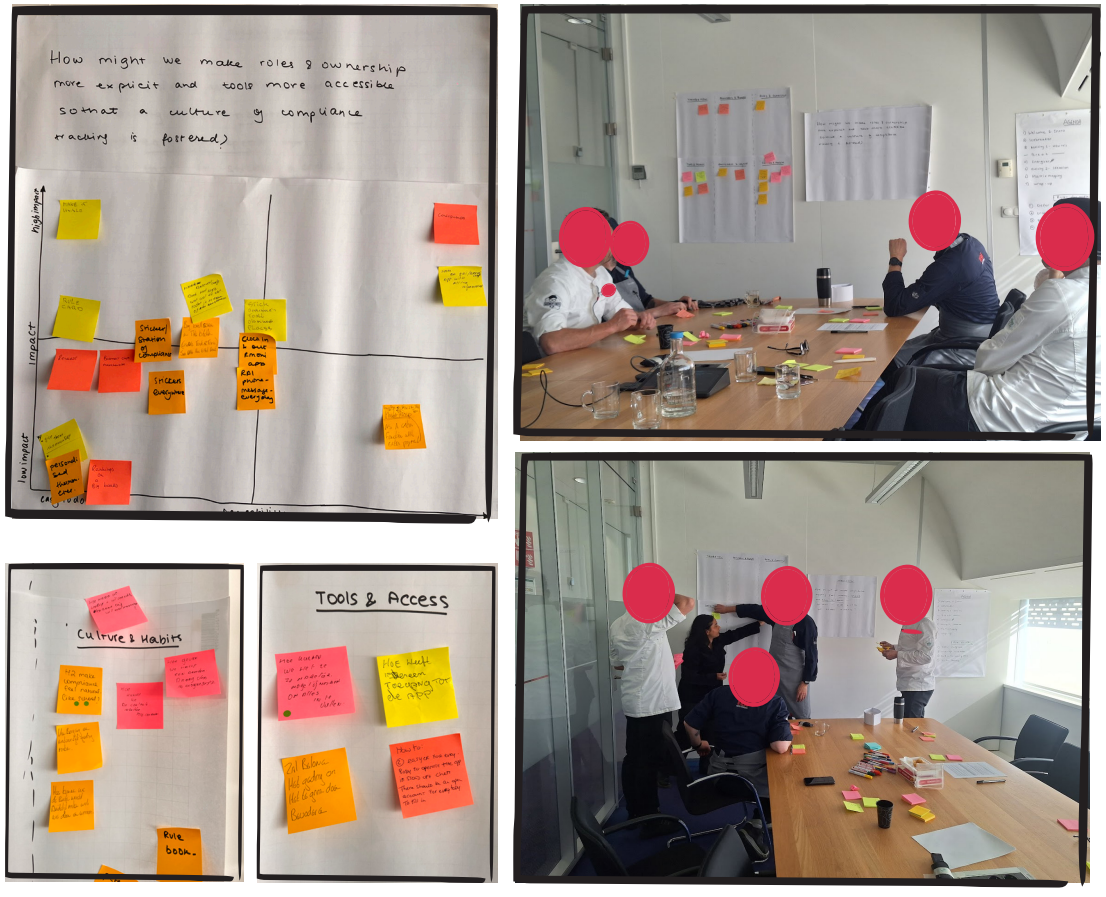


Figure 20. Co-Framing Workshop with Chefs

Two themes dominated the discussions: ownership and tool friction. Ownership was described as concentrated in a few individuals rather than shared across the team. As one participant explained: **"It's always [Lead Chef 1] or [Lead Chef 2]. When they're not here, nothing gets done."** Another added: **"Nobody knows when they're supposed to do it."** These reflections reinforced findings from shadowing (Chapter 3.3) that compliance is person-dependent and collapses in the absence of key individuals.

Tool use was another friction. RMONI was described as slow and disruptive to workflow: **"You have to go into your phone, get past your WhatsApp, open RMONI, find the tab... and then what? It's already too late."** In the "illegal brainstorming" exercise, participants jokingly suggested ways to sabotage compliance, such as **"lose the batteries [of thermometers]"** or **"say your phone died."** While playful, these ideas highlighted the fragility of current routines and the over reliance on tools that are not seamlessly integrated into service.

Alongside critique, chefs articulated what effective integration would look like. Compliance tools, they argued, should be as present and accessible as knives: **"Always in hand."** This expectation aligns with behavioural models (Chapter 2.3), which emphasise salience, habit cues, and environmental fit as direct determinants of action. Participants stressed that logging should not feel like an imposed task but become part of professional practice: **"Don't make it a trick. It has to become a natural behaviour."**

The workshop reminded me that my role was not to provide answers, but to create a space where chefs could reframe the problem themselves based on their lived experience

4.3 Behaviour Prioritisation

This phase shifted the focus from diagnosing frictions to identifying compliance behaviours with the highest potential for change. The aim was to isolate small, high-impact actions that, if reinforced, could improve consistency across RAI's kitchens. Prioritisation drew on earlier fieldwork: shadowing, behavioural profiles, and problem framing and was refined in the co-framing workshop, where four core chefs assessed which behaviours could realistically fit into daily routines.

The exercise asked chefs to review common breakdowns and add examples from their own practice. The focus remained on concrete, observable actions rather than abstract goals such as 'be more compliant.' Examples included logging temperatures immediately after checks, placing thermometers or tablets within easy reach, assigning logging responsibility by day, and verbally reminding peers during service.

Three priority behaviours were identified:

Real-time logging: Logging should happen at the moment of action, not at the end of the shift. As one chef explained, **"I do it right when I check. Otherwise, it's gone. And I don't want to carry it in my head."**

Clear role assignment: Allocating responsibility by day (e.g., "Chef 1 on Mondays, Chef 2 on Tuesdays") was viewed as a practical way to reduce ambiguity and enable peer accountability.

Environmental cues: Positioning tools where they are naturally used **"Put the checklist where you wash your hands"** or **"Make the thermometer part of your station"** was seen as a simple but effective prompt. These reflect what literature describes as anchor behaviours: small, routine actions that become habits when tied to existing workflows Fogg (2009).

To support targeting, a prioritisation matrix was developed, mapping two variables: perceived responsibility (vertical axis) and system access (horizontal axis). Core staff and long-term flex staff (e.g., legacy or contract workers) scored high on both, making them the most suitable entry point for reinforcing compliance behaviours. Contract flex staff followed but required clearer expectations and onboarding. Transactional and freelance staff, by contrast, had low system access and limited perceived responsibility, meaning structural adjustments would be needed before behavioural change could be expected.

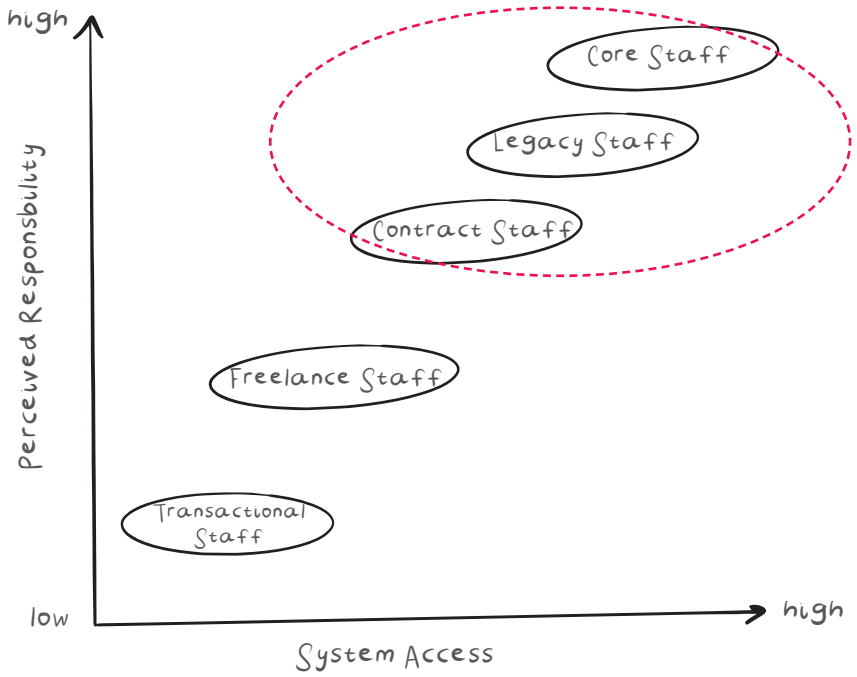


Figure 21. Behaviour Prioritisation Matrix

4.4 Second Problem Reframing

The initial problem frame asked: **What behavioural, organisational, and contextual factors contribute to the postponement or omission of food-safety compliance tracking?** This framing implied that the challenge lay in individual awareness or discipline.

Field evidence from shadowing, behavioural profiling, and the co-framing workshop demonstrates otherwise. Staff consistently knew and valued the required checks; the breakdown occurred at the point of logging. This reflects a systemic misfit between compliance tools, role structures, and the tempo of kitchen work (Nielsen, Daalhuizen, & Cash, 2021; Nielsen et al., 2025). As Griffith (2010) and Yiannas (2009) show, such gaps emerge not from cognitive deficits but from cultural conditions: weak accountability, diffused ownership, and fragile routines. The chefs' reflected **"It's always [Lead Chef 1] or [Lead Chef 2]. When they're not here, nothing gets done"** make clear how compliance responsibility is concentrated in individuals rather than shared across teams.

Workflow friction compounds this misalignment. The RMONI system interrupts the flow of service **"You have to go into your phone, get past your WhatsApp, open RMONI, find the tab... and then what? It's already too late"** hindering the formation of reliable habits. As Nielsen et al. (2025) argue, systems that fail to align with everyday rhythms rarely sustain adoption. Therefore, compliance tools must be embedded directly into routines **"as present and accessible as knives"** to serve as habit-forming cues.

Taken together, these insights offer a reframing of the research problem. The question is no longer why staff neglect logging, but how compliance tracking can be designed as a visible, habit-forming, and co-owned behaviour that aligns with the pace of kitchen work. This reframing shifts the focus of inquiry from individual behaviour to the systemic/contextual alignment of culture, tools, and routines.

It positions compliance not as a training deficit but as a design opportunity: to embed, cue, and reinforce practices until they become part of the culture of kitchen work.

These findings show that the environment itself shaped whether compliance was sustained. When tools like RMONI were hard to access, poorly timed, or disruptive to the rhythm of service, logging was dropped even when staff intended to do it. By contrast, when cues were visible and fitted naturally into the flow of work, they acted as anchors that supported follow-through.

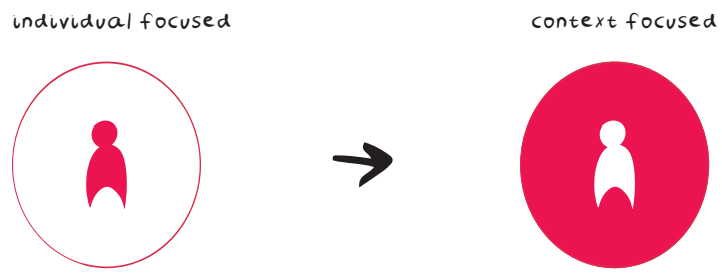


Figure 22. Second Problem Reframing

In framing compliance breakdowns as systemic rather than individual, I had to challenge the default narrative of negligence.

Behavioural profiles made one thing clear: compliance was unevenly distributed. Core staff carried the load, while flex staff stood on the margins.

If compliance is to endure, responsibility must be shared, and logging must become part of the flow of work. With these insights in hand, we shift from diagnosis to design: creating interventions that make compliance visible, actionable, and owned.

Chapter 5

Designing the Intervention

This chapter translates behavioural insights into design directions. It documents an ideation workshop with chefs, develops a low-fidelity prototype cue, and positions it within RAI's compliance system as part of an integrated design approach.

5.1 Ideation Workshop with Chefs

An ideation workshop was conducted with one operations sous chef, one chef de partie (compliance ambassador), and one chef (compliance ambassador). The purpose was to move beyond diagnosing barriers and begin generating values-led directions for embedding compliance into daily kitchen practice. The session combined abstract laddering and round-robin ideation, methods chosen to elicit implicit values and stimulate idea-building through conversation.

In the abstract laddering activity, participants reflected on the "why" behind compliance tracking. Discussion quickly moved from the mechanics of logging to underlying values: maintaining operational flow, protecting autonomy, and working with pride rather than obligation. As one chef explained, **"I'm not a kindergarten teacher or a policeman. We are full prof[essional]."** The frustration was not with food safety itself, but with systems imposed in ways that disrupted the tempo and tacit routines of kitchen life.

The round-robin ideation activity then invited participants to respond to prompts such as: **"How could compliance tracking be made more visible at your workstation?"** and **"If you had to remind someone during the day, how might you do it?"** Instead of sketching alone, participants built on one another's suggestions. Ideas were practical and rooted in context: placing checklists by handwashing sinks, issuing personal thermometers, and embedding logging tools into stations. As one chef put it, **"Just make it part of the station, like your knife or spoon. Don't make it something you have to go find."**

Accountability was another recurring theme. Participants argued that responsibility needed to be distributed clearly without adding bureaucracy. One proposed: "We need to assign days. If [Chef 1] is here, it's him. If he's not, it's you." This highlighted that the barrier was not motivation but ambiguity: "Nobody knows when they're supposed to do it."

Later discussion centred on professional pride and agency. Chefs rejected the idea that reminders or external enforcement would work: **"It's not about reminders. It's about making it fit the kitchen. Otherwise, it's just one more thing we skip."** Instead, they emphasised that compliance should be framed as a responsibility to be proud of: **"When you give somebody responsibility, they are happy about themselves also because they have a responsibility to do something."** This aligns with behavioural perspectives that intrinsic motivation and identity-based engagement provide more sustainable levers for behaviour change than external control (Nielsen et al., 2021).

Although the session involved only three participants, the values and ideas expressed were consistent with patterns identified in shadowing, interviews, and the co-framing workshop. The convergence reinforces that compliance failures at RAI do not stem from lack of care, but from systems misaligned with kitchen culture. The insights from this workshop build directly on earlier findings by pointing to design opportunities that embed compliance in visible, proximate, and identity-affirming ways.

Figure 23. Ideation Workshop with Chefs

5.2 Prototyping Interventions

The ideation workshop with chefs (Section 5.1) highlighted three main directions for improving compliance tracking: making logging visible and proximate at workstations, assigning clear but lightweight responsibility (e.g., rotating by day), and embedding compliance into tools that chefs already treat as part of their professional kit. Suggestions included placing checklists near sinks, issuing personal thermometers, and integrating reminders directly into stations: **"Just make it part of the station"** Chefs also stressed that ownership must be clear without becoming burdensome. These insights reinforced the need for interventions that were low-friction, identity-aligned, and embedded in the flow of work rather than imposed from outside.

Prototyping was the next step to test whether these principles could be operationalised in practice. Instead of producing polished artefacts, the aim was to create low-fidelity interventions that could be tried quickly and refined. Prototyping at this stage helped translate reframed insights into testable forms as early artefacts can help reveal adoption barriers before larger roll-outs.

Here I translated insights into prototypes, simple cues that could 'speak' the language of the kitchen.

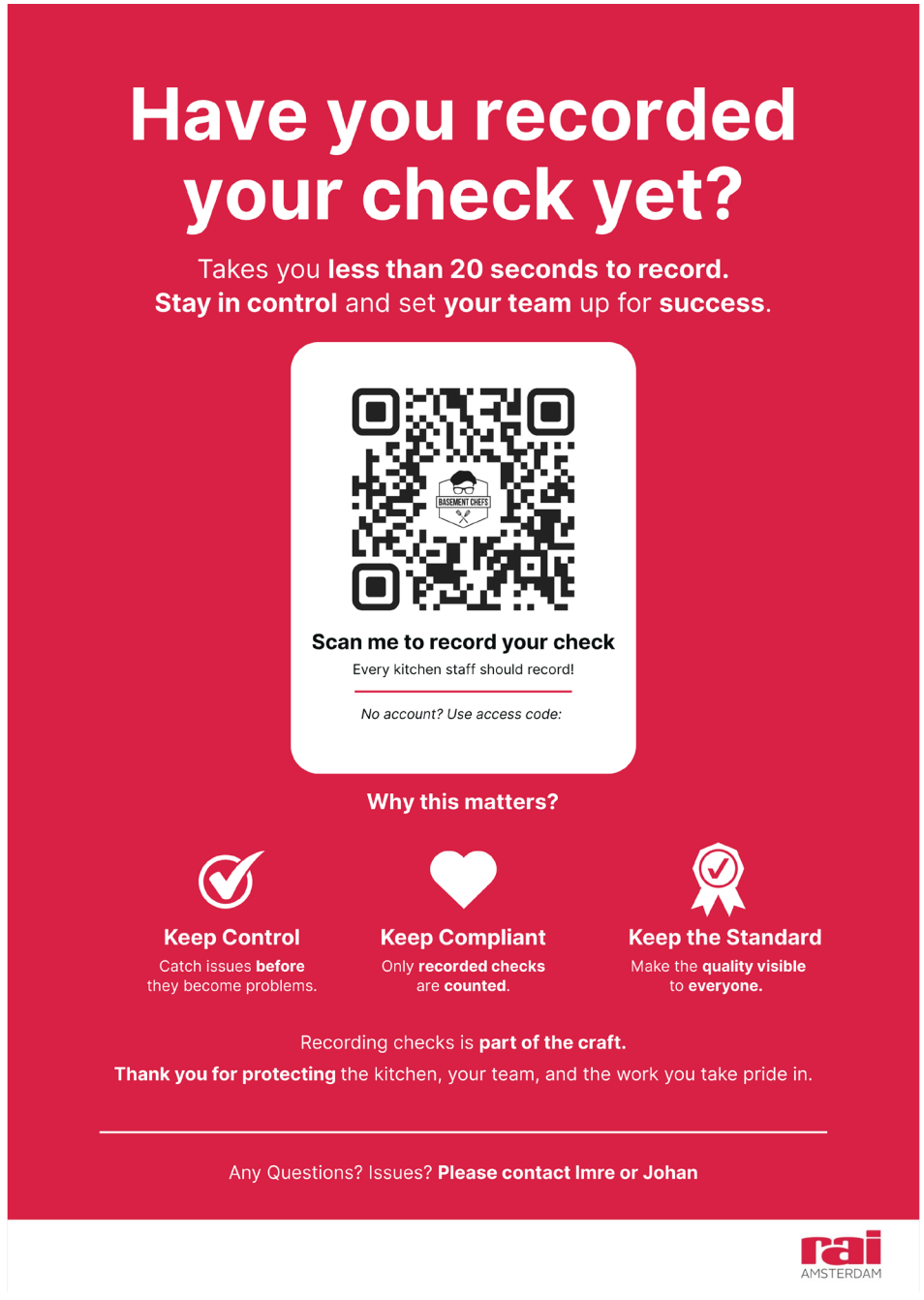


Figure 24. Prototyping Intervention

The first prototype took the form of a revised poster. This choice responded directly to workshop themes of visibility, cues, and ownership. The poster was designed as a reflective question: "Have you recorded your check yet?" This reframing positioned logging as a voluntary, professional act rather than an obligation. It also illustrates the gap that was observed in Chapter 3, where chefs may 'visually check' for food sasfety but this poster emphasised the important of actually 'recording' that 'check'. When this cues is placed where work actually happens it could function as a habit anchors. To reduce friction, a QR code was added so staff could log immediately at the point of action.

The poster also addressed the "not my job" gap identified throughout fieldwork. Text such as "Every kitchen staff should record" reinforced shared responsibility, and text such as "Keep Control," "Keep Compliant," "Keep the Standard" frame logging as part of professional pride, echoing Yiannas's (2009) view that identity-based framing motivates sustained behaviour. A final note of gratitude: "Thank you for protecting the kitchen, your team, and the work you take pride in" acknowledges effort and reinforces recognition as a motivator. Placed in key shift moments, the poster acts as an environmental anchor, reducing task-switching costs (York et al., 2008) and linking checks directly to the physical flow of work.

In summary, the poster prototype was conceptualised directly from workshop insights. It operationalised the chefs' call for visibility, clear ownership, and professional alignment, while addressing the previously known barriers of diffusion, friction, and low salience. The next step was to test whether this low-fidelity cue could potentially shift behaviour in practice.

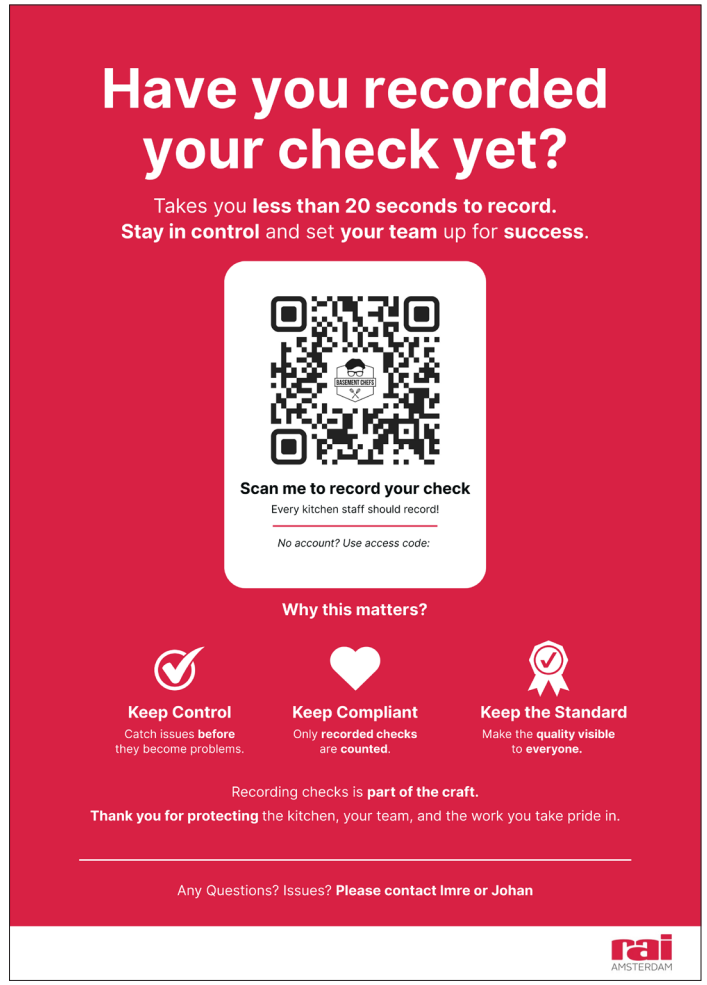


Figure 25. Prototyping Intervention, Explanation.

5.3 Positioning the Prototype Within RAI's Compliance System

The poster prototype is a way to test specific assumptions about how compliance behaviour can be more integrated. It is designed to check whether small, low-friction cues can support the **Three Lines of Defence** (Chapter 1) system in practice.

The prototype will be tested against three main assumptions:

Line 1 – Kitchen Operations

- Assumption: placing visible cues at workstations will make logging easier to remember and harder to ignore.
- What to test: whether chefs notice the poster, whether it prompts curiosity or action, and whether it reduces the tendency to delay or skip logging.

Line 2 – Compliance Officers

- Assumption: shared responsibility cues ("every kitchen staff should record") reduce the current problem where logging falls to a few individuals.
- What to test: whether use of the poster creates a more distributed pattern of engagement, visible in both chef feedback and scan data.

Line 3 – Audit Function

- Assumption: logging behaviour can be made more transparent by linking cues with system data.
- What to test: whether poster scans and interactions can be integrated into the RMONI dashboard so compliance officers and auditors see not only how many checks are logged, but also how many staff engage with the tool.

In short, the prototype is being tested for three factors: salience in daily work (Line 1), distribution of responsibility (Line 2), and traceability for oversight (Line 3). The following chapter focuses on testing these assumptions to see whether the intervention can move from an isolated cue to a working part of RAI's compliance system.

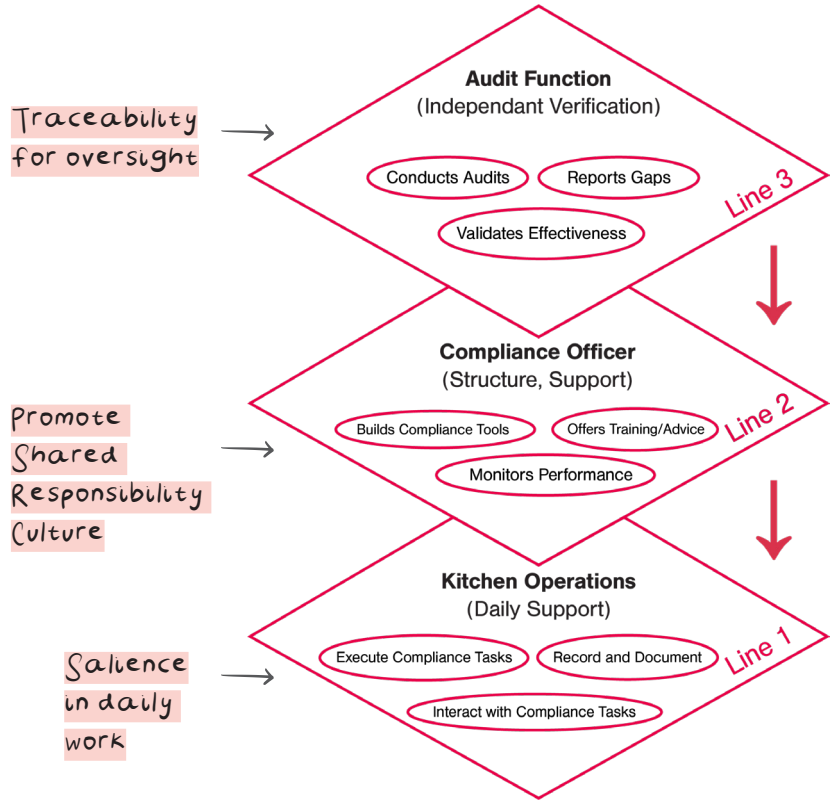


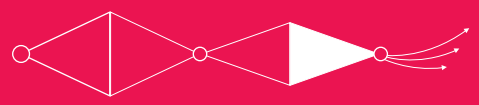
Figure 26. Prototype Testing Rationale mapped on RAI's Three Lines of Defence for Compliance

Ideas are powerful, but only if they hold up under pressure. Early interventions showed promise on paper, but kitchens are places of speed, fatigue, and improvisation.

The real question is: will these cues and roles still work in the heat of service? The next chapter puts them to the test: embedding prototypes in live kitchen shifts to see what sticks and what slips.

Chapter 6

Testing in-Context



This chapter tests prototypes in live kitchen shifts to evaluate their fit, salience, and role clarity. It reports staff responses, identifies limits of visibility-only interventions, and reframes the problem towards cultural embedding of compliance.

6.1 Intervention Testing

6.1.1 Placing Intervention in High-Traffic Areas

Behavioural interventions were piloted in the hot and cold kitchens at RAI to test how low-fidelity design prompts could fit into daily practice. These kitchens were chosen because of their operational intensity, the range of staff roles present, and their physical location within the wider food service system. Together, they provided a realistic environment to observe how interventions interacted with workflow.

The interventions targeted three frictions identified in earlier research: weak salience of logging, unclear ownership, and poor alignment between tools and daily routines. To address these, prompts were placed in high-visibility and high-traffic areas identified during shadowing, staff input, and a preparatory session with the operations team. The aim was to embed reminders in the natural flow of movement rather than introduce additional steps.

Three variants were developed:

- A0 poster on the freezer door, a shared crossing point used frequently by both hot and cold kitchen staff.
- A4 visual cue on the hot kitchen oven, positioned to be visible during preparation and cooking.
- Printed insert inside the green book for each kitchen unit, a reference document that chefs consult throughout the shift.

Each intervention carried a reflective message such as "Have you recorded your check yet?" and a QR code linked directly to the RMONI system. This combination was designed to make logging both more visible and easier to access. At this stage, the emphasis was on testing whether the prompts were noticed, whether their placement was relevant, and how they fitted into the pace of kitchen work. Usage data from the QR codes was captured, but the priority was understanding integration and visibility rather than measuring long-term compliance impact.

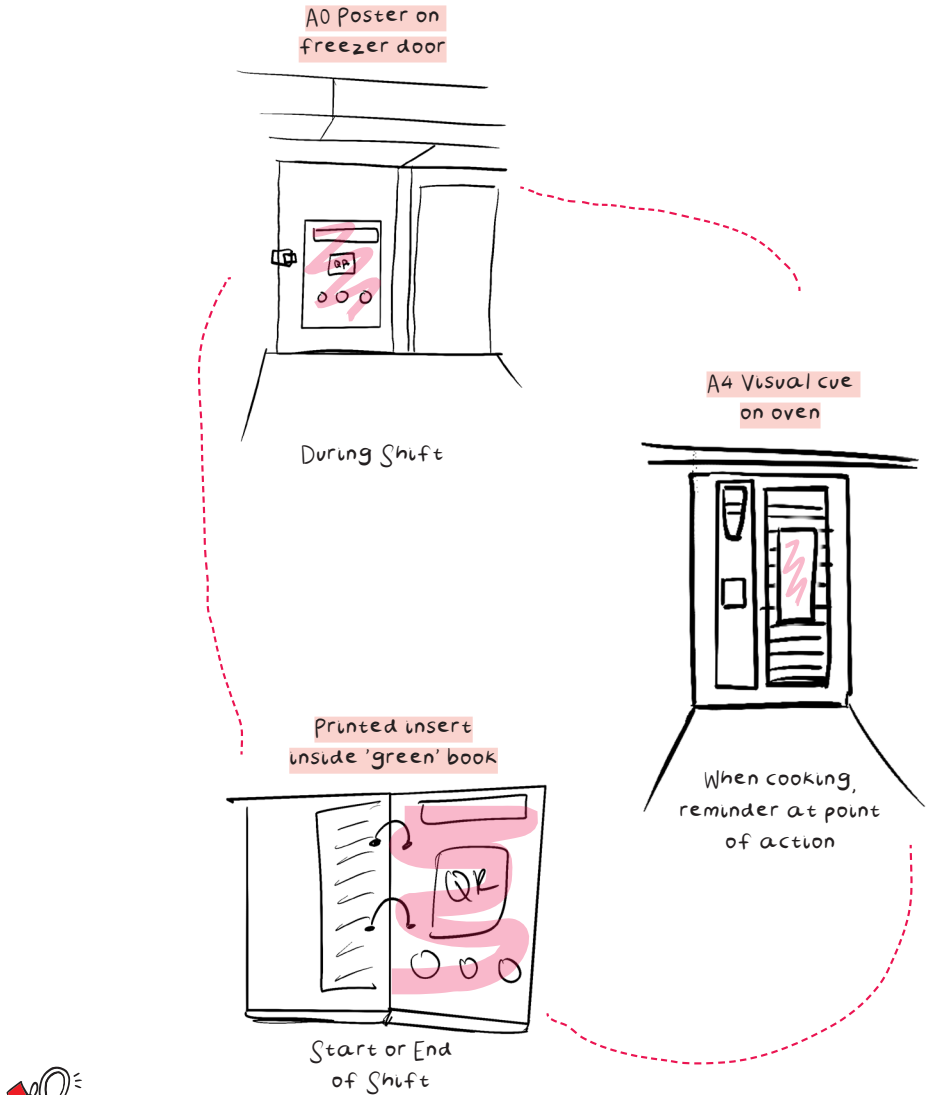


Figure 27. Interventions at key moments of shift. Self-illustration.

Testing in the hot kitchen showed me that visibility alone was not enough. I had to challenge my own assumption that prompts would sustain behaviour.

6.1 Intervention Testing

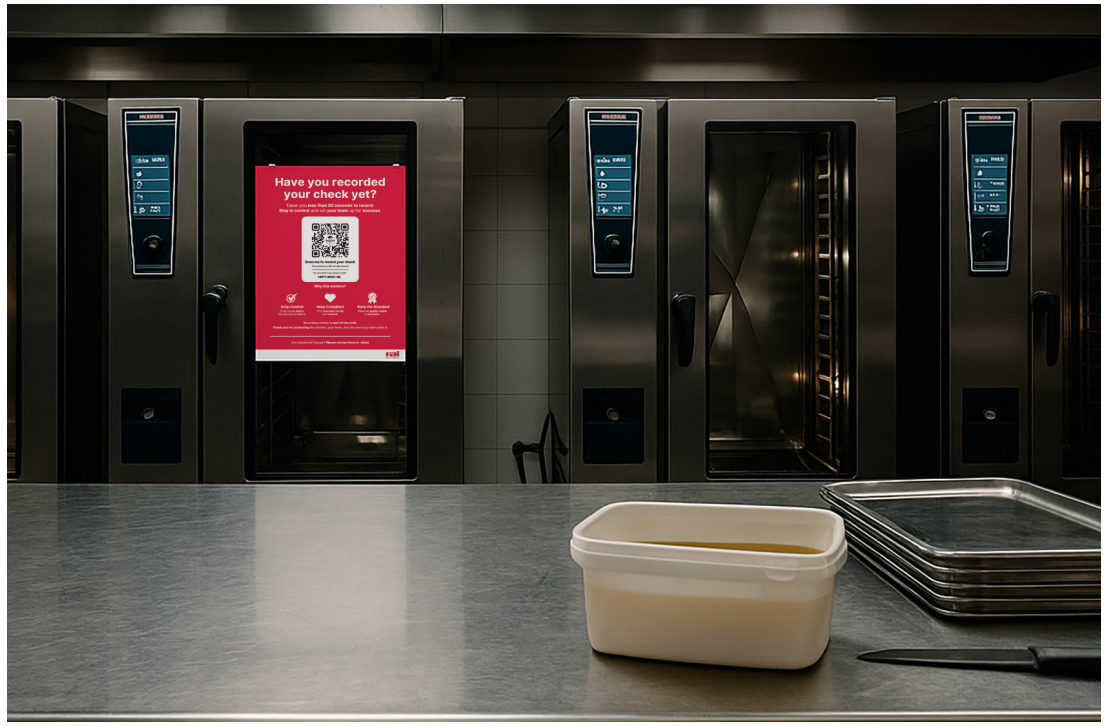


Figure 28. Prototype Renderings In-Context. Generated via Sora and edited in Adobe Photoshop.
Humans in this image are AI Generated

6.1.2 Staff Feedback

Because the testing period overlapped with a high-volume service period, formal interviews were not possible. Instead, feedback was gathered informally through in-situ observation, short conversations, and casual check-ins with both core and flex staff. This approach provided direct insight into how the interventions were noticed and interpreted within the pressure of daily operations.

Observation focused on whether staff:
1) looked at the posters 2) scanned the QR codes or 3) completed the checks in RMONI. The QR code tracker gave a secondary signal of attention, indicating which locations attracted more interaction. Informal comments also revealed perceptions of the intervention. For example, one flex worker asked, **"Oh, is this for everyone? I can also do it? I'm just here for a week."** While the staff member did not log a check, the comment reflected curiosity and a willingness to participate: if access and inclusion were clear. This echoed earlier findings that visibility without role clarity limits uptake.

Responses to prompts varied. Some staff noted, **"I saw it, yeah, made me think again,"** while others dismissed it with, **"I usually ignore QR codes unless someone asks me."** Several mentioned that direct interaction from a colleague remained a stronger trigger than a poster, especially in busy service. However, even when the intervention did not necessarily lead to logging, it served an indirect role: it created curiousity. Short conversations about compliance that were previously absent.

Overall, staff did not outright reject the posters. Engagement was selective and shaped by role, workload, and perceived relevance. For core and legacy staff, the prompts reinforced habits already in place. For transactional or freelance staff, they raised questions of access and responsibility rather than sparking action.

These moments of failure became signals that the problem was cultural, not procedural.

A key insight was that effectiveness depended less on novelty and more on fit. Posters placed in high-traffic areas, using simple language and embedded in the flow of work, were acknowledged more often even if not always acted upon.

In summary, testing showed that visibile prompts can draw attention and spark conversation, but they cannot by themselves close the intention–action gap. Without access to systems, clear responsibilities, and a sense of inclusion, cues remain limited. Yet, these interventions marked a shift: they made compliance visible, turned it into a topic of discussion, and highlighted structural barriers, providing a base for further iteration.

Figure 29. Quotes from Kitchen Staff

6.2 Iterated Intervention Testing

6.2.1 Role-specific Compliance Prompts

The second iteration of the intervention targeted a barrier identified in earlier testing: unclear task ownership. The first prototypes increased visibility through posters in high-traffic areas, but observation showed that visibility alone did not translate into action when staff were uncertain about whether the responsibility applied to them.

To test whether role-specific prompts could address this issue, customised posters were developed and placed inside the sheet map books used daily in the hot and cold kitchens. Each poster carried the name of a designated staff member and focused on a single priority behaviour: the daily cleaning check. This task was chosen because backend RMONI data showed inconsistent logging in the hot kitchen and over-reliance on one staff member in the cold kitchen.

The operations team helped identify the most appropriate staff member for each kitchen, and two role-assigned posters were produced. The identified hot kitchen staff was Core Staff who had not recorded a check in the RMONI App. The identified cold ktichen staff was who usually records checks in the RMONI App. Since this was an exceptionally busy service period, the idea was to test who will actually record the check first. Each included a QR code linked directly to the RMONI app, with a unique tracker embedded to capture engagement. The posters were inserted into the sheet maps without any further instructions or reminders, ensuring that any response would reflect the effect of the prompt itself rather than external reinforcement.

The objective of this test was to see whether making compliance visible, specific, and personalised within a routine-access location could strengthen follow-through. Testing took place during a live service day, with monitoring beginning at 8:00 a.m., when the daily checklists were activated in the system.

Figure 30. Intervention Rendering In-Context. Generated via Sora. Edited in Adobe Photoshop
Humans in this image are AI Generated

6.2.2 Staff Response and Behavioral Insight

The role-specific intervention produced different outcomes across the two kitchens, offering further insight into how prompts function in practice.

In the cold kitchen, the named staff member did not scan the QR code but did complete the check directly in the RMONI app. When asked, they explained that the poster served as a useful reminder during a busy shift. This suggests that when capability, motivation, and system access are already in place, even a light-weight prompt can reinforce existing routines without disrupting workflow.

In the hot kitchen, the result differed. The assigned staff member scanned the QR code but did not complete the check. In conversation afterwards, they explained that being redirected to a login screen led them to drop the task, adding that **"I don't have time this week, sorry."** This highlights how friction, uncertainty about next steps, and lack of familiarity with the tool can break the chain of action, even when role clarity is provided.

The contrast between kitchens shows that naming responsibility alone is not enough. While it helps make ownership visible, follow-through still relies on enablers such as confidence with the app, smooth login access, and integration into the task flow. In the cold kitchen, the poster worked as a cognitive nudge: reinforcing the task without requiring the QR code. In the hot kitchen, by contrast, system barriers outweighed the effect of the prompt.

Together, these results reinforce a key behavioural principle: prompts must match the profile of the user. For some staff, the issue is clarity of responsibility; for others, it is ease of execution. In all cases, the tools must feel embedded and accessible, not like an extra step outside the workflow.

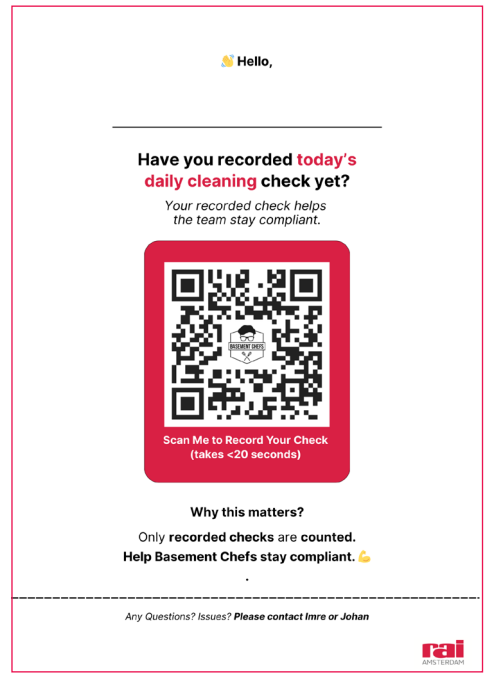


Figure 31.1. Role-Specific Prompt Intervention Design

Kitchen	Reponse	Behavioural Insight	Implication for Design
Cold Kitchen	Staff ignored QR Code but completed check via RMONI App directly due to familiarity	Prompt acted as a reminder, reinforcing existing routine	Prompts can strengthen behaviour when capability and access are already in place
Hot Kitchen	Staff scanned QR Code but dropped task at login screen	Friction login, timing, unfamiliarity, disrupted follow through	Prompts alone are insufficient; need smooth access and tool familiarity

Figure 31.2. Outcomes of role-specific compliance prompts

6.3 Third Problem Reframing

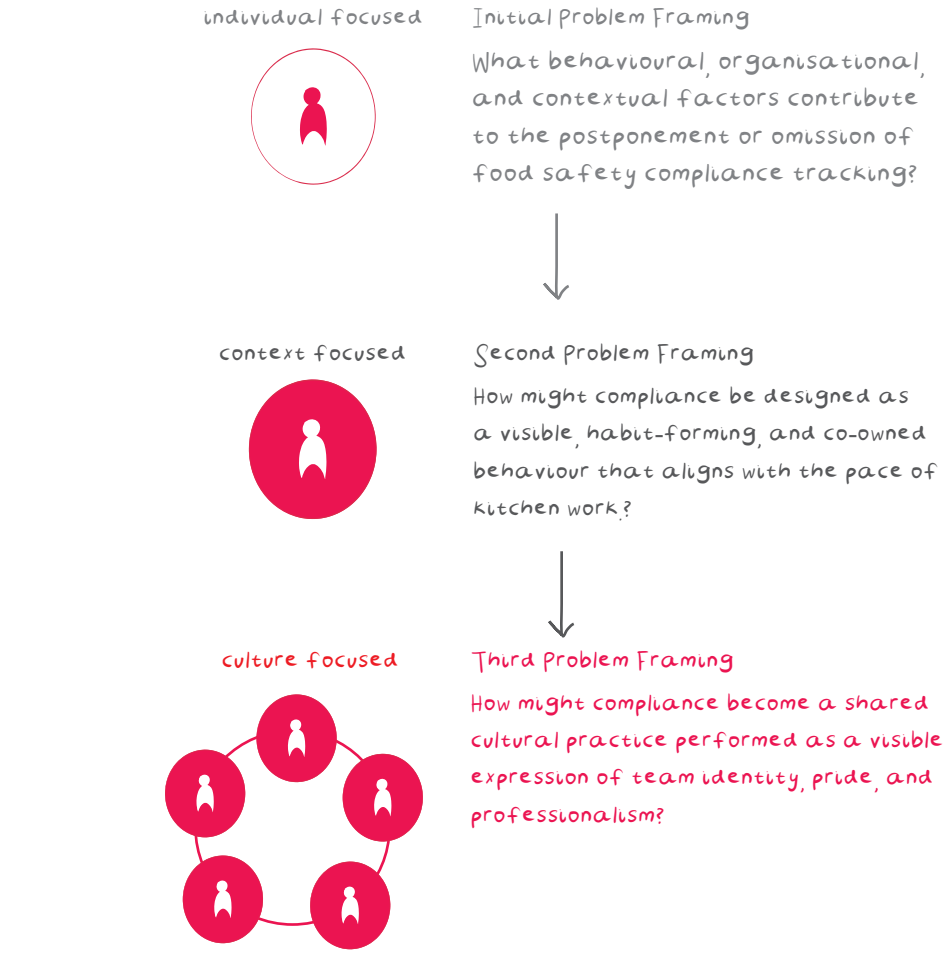
The initial problem asked why staff postpone or omit compliance logging despite awareness. The second reframing shifted the focus from individual motivation to system fit, asking how compliance could be made visible, habit-forming, and role-anchored. Insights from in-context testing now point to a further reframing: sustainable compliance cannot be achieved through prompts or tools alone: it requires cultural embedding.

Testing showed that interventions worked when they resonated with kitchen identity and rhythms. In the cold kitchen, a poster on the freezer door was seen as part of the environment: staff acted not because they were told, but because the prompt felt like it **"belonged here."** By contrast, in the hot kitchen, a flex worker's question **"Can I also do it? I'm just here for the week"** highlighted that inclusion and legitimacy are central. Staff will only take ownership when they recognise compliance as part of their role and team identity.

This finding reframes compliance as more than a task or system interaction. It is a shared practice shaped by pride, professionalism, and belonging. Workshops with chefs confirmed that tools are effective only when they feel like professional equipment, not external demands.

The research question therefore evolves again:

- Initial framing: Why do staff fail to log despite awareness?
- Second reframing: How might logging be designed to be visible, habit-forming, and role-anchored?
- Third reframing: How might compliance become a shared cultural practice as a visible expression of team identity, pride, and professionalism?



Here I had to challenge my own framing the issue was no longer about fixing tools, but about embedding compliance into identity and culture

Figure 32. Third Problem Reframing

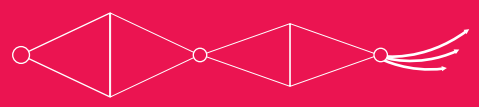
Testing revealed both potential and limits. Visibility sparked attention, but without ownership and identity, behaviours faded.

Prompts alone could not close the gap; compliance had to be reframed as a shared cultural practice.

The next chapter develops this strategy holistically: BaseCode, strategic roadmap, dashboard, and CODE framework designed to embed compliance as culture.

Chapter 7

Developing the Behaviour Change Strategy



This chapter introduces BaseCode, a system of tools: roadmap, dashboard, persona cards, and CODE framework, designed to embed compliance as culture for Basement Chefs at RAI. It shows how these tools connect over time to shift compliance from task to team identity.

BASECODE

BASEMENT CHEFS

Humans in this image are AI Generated

BASECODE

BASEMENT CHEFS

7.1 Framing Compliance as Culture

One of the final insights from this research was that the word compliance itself did not align with the values and professional identity of the Basement Chefs. In everyday use, it carried connotations of bureaucracy and enforcement, which conflicted with the pride and ownership chefs associated with their craft. If compliance behaviours were to be sustained, they needed to be reframed in a way that connected with staff values rather than imposed external rules.

To address this, this research proposed to reframe compliance intiative as **BaseCode.** Through the various research activities the term is designed to be memorable, easy to recall, and aligned with the chefs' identity. "Base" signals the Basement Chefs as a team, while "Code" refers to a set of shared principles or standards. In this sense, compliance is no longer 'communicated' as a checklist, but as a collective code of conduct that reflects professionalism, pride, and mutual accountability. This meaning reinforces the strategic shift: compliance becomes a cultural practice, not an administrative demand.

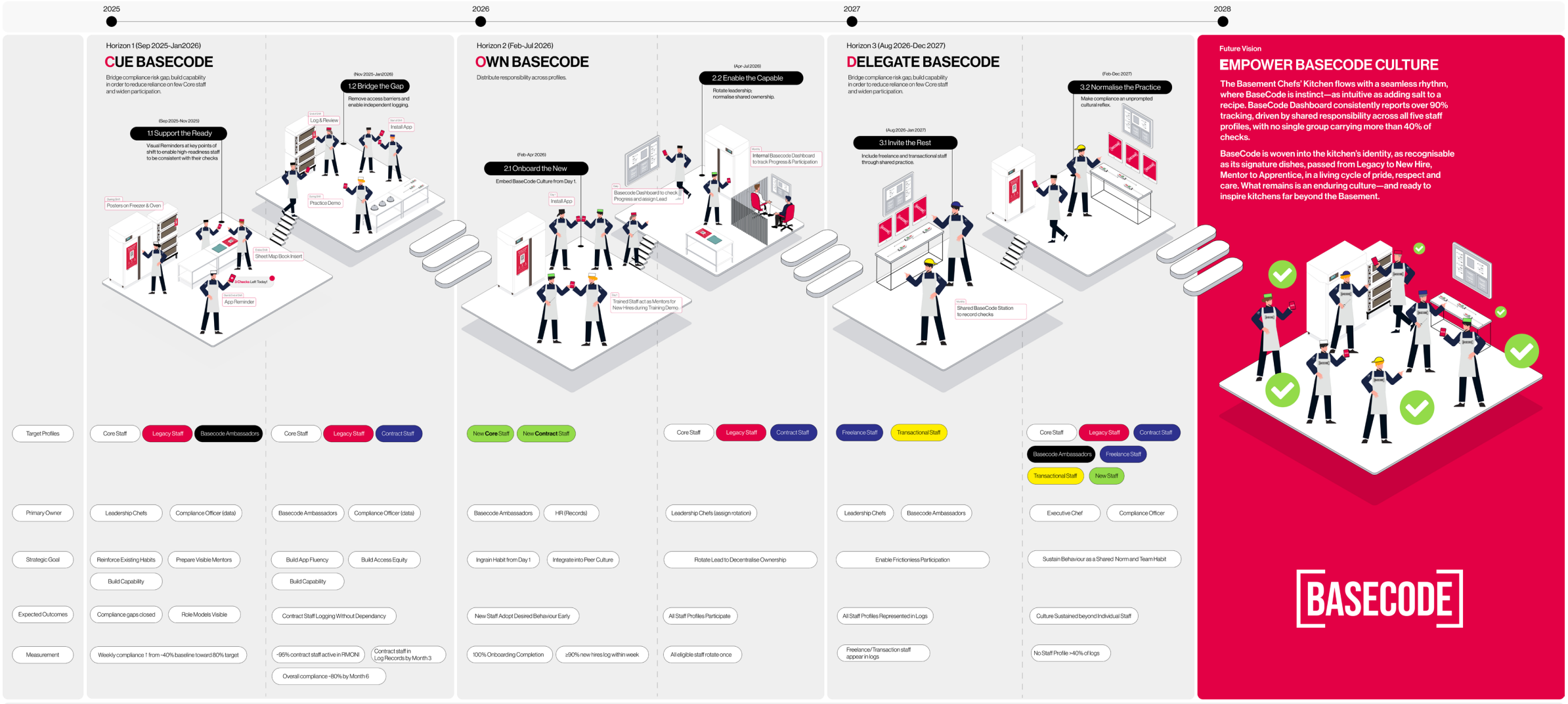
BaseCode emerged by translating fragmented insights into a coherent system of tools.

The renaming also draws on an existing example of value-driven practice at RAI: the Heartwarming Amsterdam initiative. In this programme, the Basement Chefs committed to sourcing regionally and sustainably, even when it required extra effort. They did so because it resonated with their identity and values, not because it was enforced through formal policy. The same principle applies to BaseCode. When compliance is framed as a standard that reflects who the chefs are and what they stand for, it becomes a source of pride rather than resistance.

By naming and framing compliance as BaseCode, the intervention positions it as part of the culture of kitchen work. This move does not, on its own, guarantee behaviour change, but it creates the symbolic and linguistic foundation for the broader strategy.

It signals to staff that compliance is not an external rule but a standard **they own together—a code that belongs to the team.**

7.2 BaseCode: Strategic Roadmap



7.2 BaseCode: Strategic Roadmap

BASECODE is proposed to be a system for shifting compliance into culture. The roadmap, dashboard, persona cards, and CODE meeting framework are designed to work together, each reinforcing the others:

- **The BaseCode Strategic Roadmap:** stages how behaviours evolve across horizons: from cues, to ownership, to distributed responsibility. It was built using the design-roadmapping framework that structures future-foresight activities (Simonse, 2024).

- **The BaseCode Dashboard:** makes progress visible. It translates daily logs into team-level metrics, showing whether the roadmap's horizons are taking hold. This closes the loop between individual action and collective visibility.

- **The BaseCode Persona Cards:** keep the human perspective present. They ensure interventions are tuned to the different staff profiles identified earlier: core, legacy, flex, and transactional so that no horizon assumes a one-size-fits-all approach.

- **The CODE Meeting Framework:** creates space for reflection. It prevents the roadmap from being a linear rollout by building in feedback loops: checking what factors need to be considered when making an adjustment, intervention etc.

Together, these elements form a strategic system:

- The roadmap gives direction over time.

- The dashboard measures and signals progress.

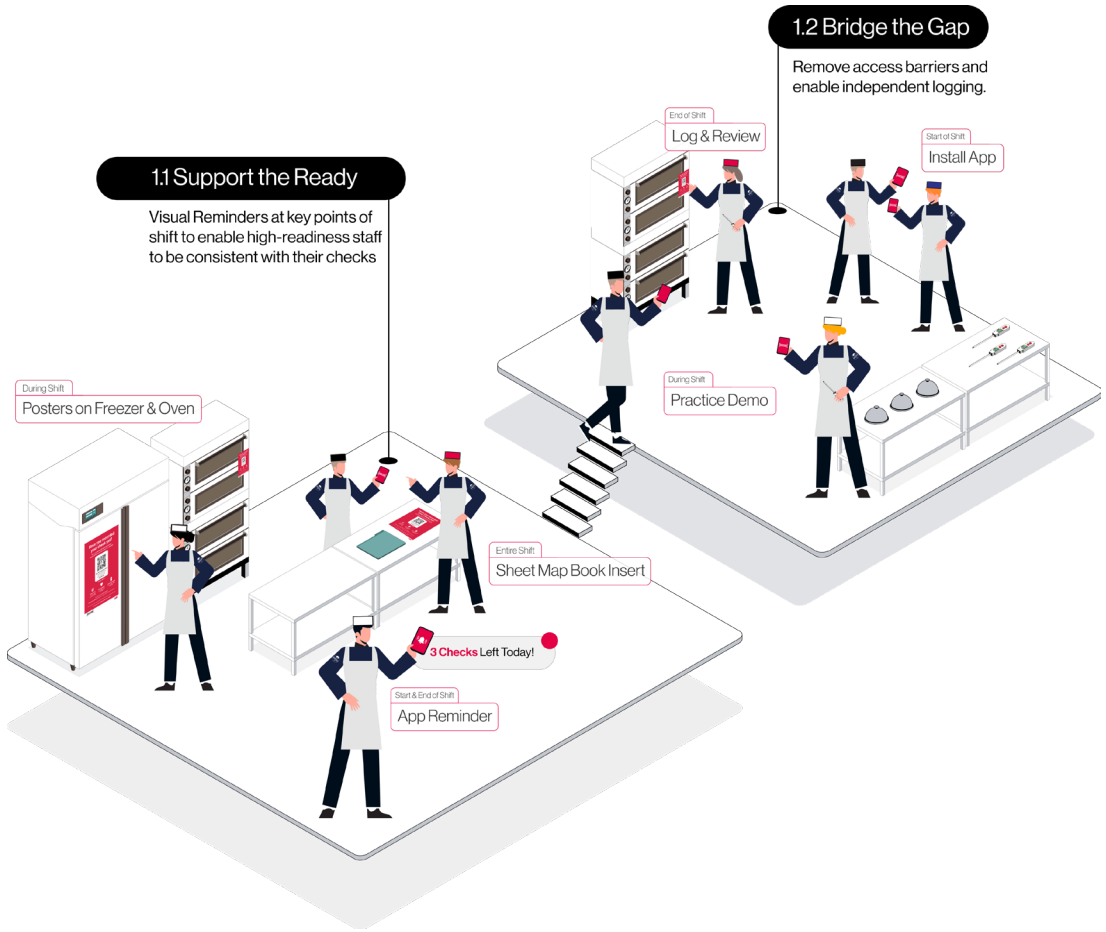
- The persona cards anchor the work in lived realities.

- The meeting framework ensures adaptation and ownership.

This is why it is a strategic roadmap rather than a tactical one. It connects the abstract (behavioural strategy) to the everyday (kitchen practice) through an integrated set of tools instead, designed to survive turnover, sustain engagement, and embed compliance as culture.

Horizon 1 (Sep 2025–Jan 2026)

Cue BaseCode



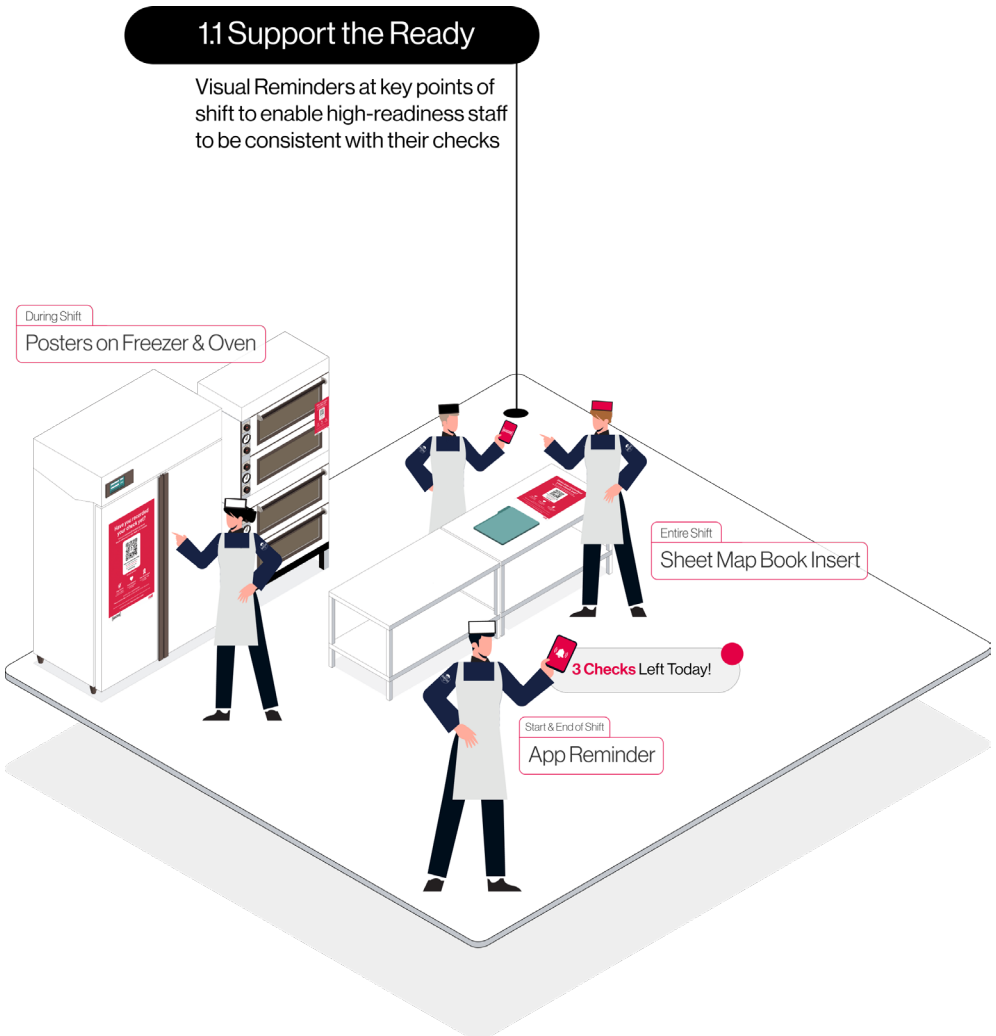
7.2 BaseCode: Strategic Roadmap

7.2.1 Cue BaseCode: Horizon 1 (Sept 2025–Jan 2026)

Overview
Horizon 1 builds the foundation for BASECODE by reinforcing capable staff who already log regularly, while closing structural gaps for existing staff who lack access or training. The aim is to stabilise logging and distribute ownership more evenly across roles.

Exit Criteria (gate to next phase):
Weekly compliance trending from ~40% toward ~80%; access barriers removed; contract staff begin to appear in log records by Month 3.

Cue BaseCode



7.2 BaseCode: Strategic Roadmap

1.1 Support the Ready (Sept 2025–Nov 2025)

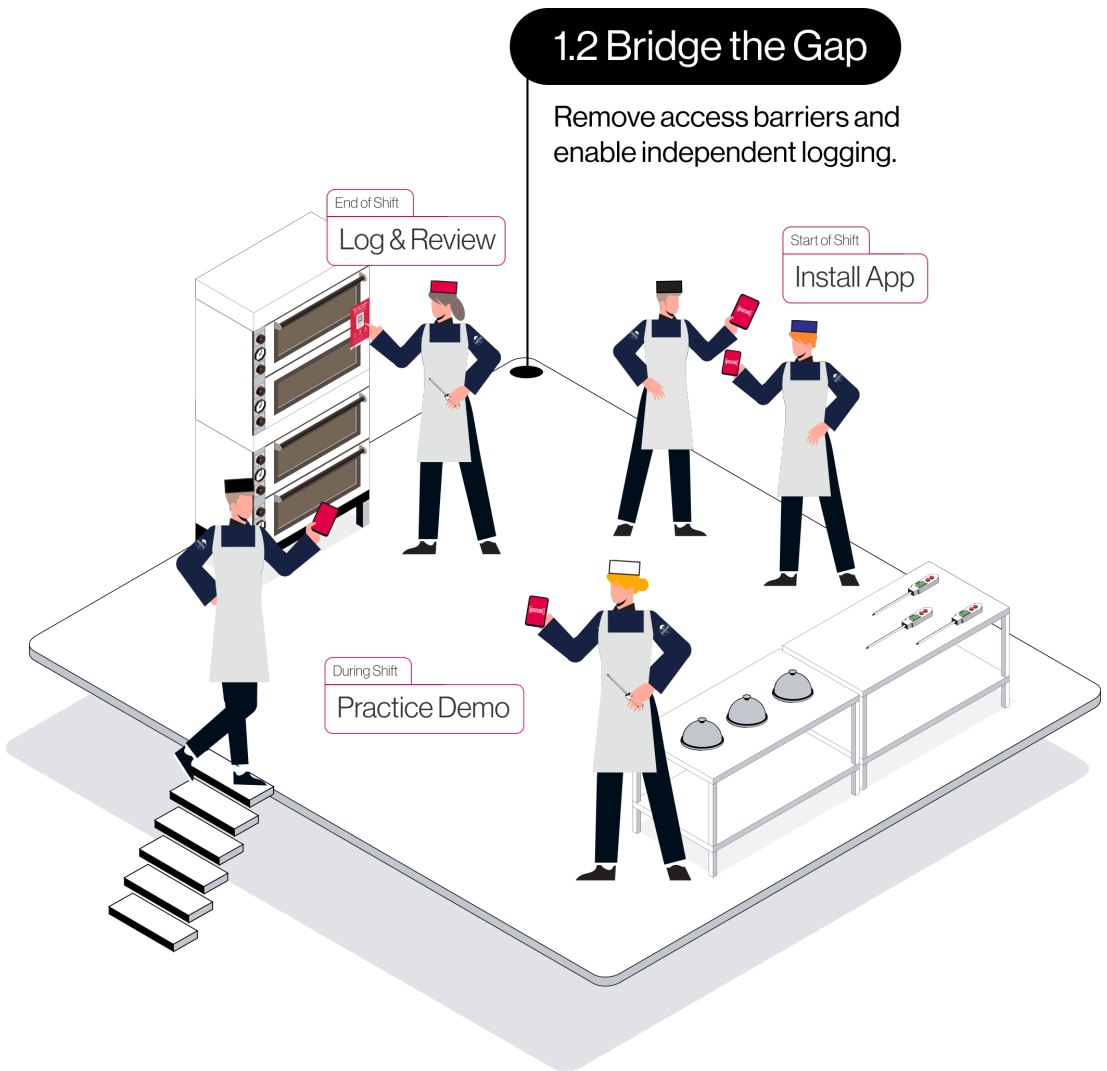
Objective: Strengthen reliable logging among core and legacy staff while reducing ownership overload.

How: Use visible prompts, activate BASECODE Ambassadors, and monitor log distribution by staff group.

Expected Impact: Core and legacy staff maintain consistent logging, but no group contributes more than 60% of total logs. This prevents over-concentration and prepares for broader adoption.

Measurement: Dashboard tracks % of logs per staff profile to flag imbalance.

Cue BaseCode



1.2 Bridge the Gap (Nov 2025–Jan 2026)

Objective: Onboard existing staff who lack RMONI app access or training.

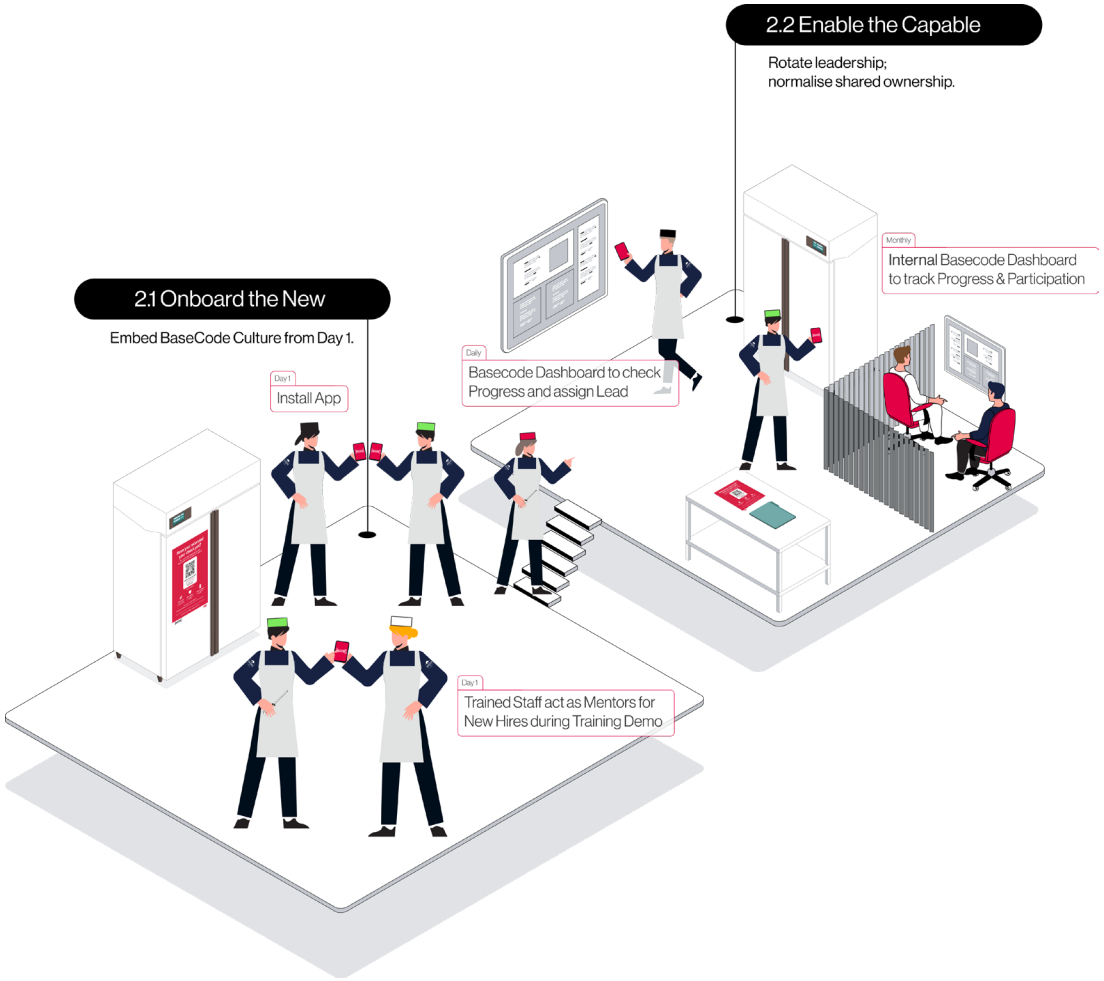
How: Provide login credentials, short onboarding, and assign clear daily responsibilities.

Expected Impact: Newly onboarded staff contribute at least 20% of logs by the end of the sub-horizon. Overall compliance approaches the horizon target.

Measurement: Dashboard tracks new-user contribution and compares before/after onboarding.

Horizon 2: Feb-Jul 2026

Own BaseCode



7.2 BaseCode: Strategic Roadmap

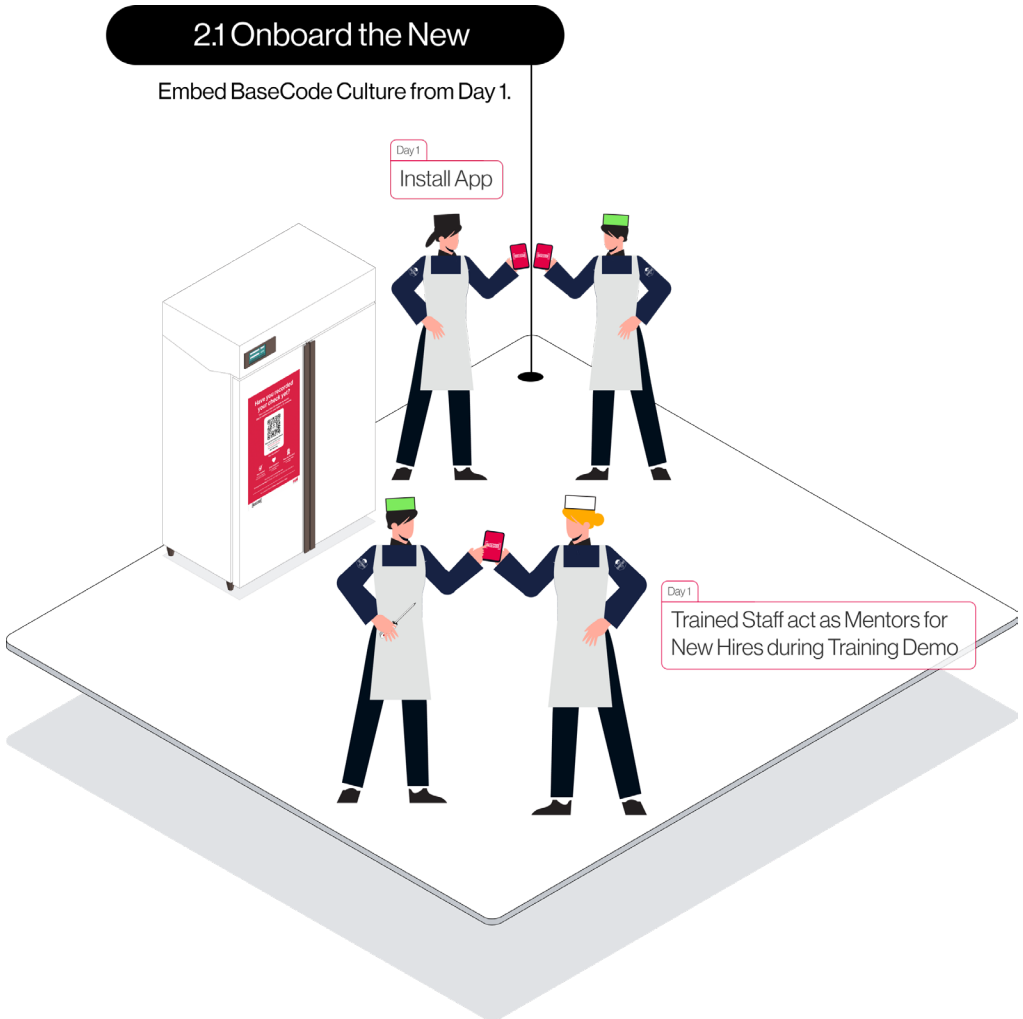
7.2.2 Own BaseCode: Horizon 2 (Feb–Jul 2026)

Overview

Horizon 2 shifts focus from stabilising compliance to distributing ownership across staff profiles. By this stage, core and legacy staff should already log reliably, and newly onboarded staff should contribute consistently. The next step is to embed shared responsibility, ensuring no single group carries the majority of logs. This horizon introduces mechanisms to build capability in new staff and to rotate leadership roles, reducing dependency on a small number of individuals.

Exit Criteria (gate to next phase):

Target: sustain overall compliance at ~80% while widening participation. At least 95% of contract staff should be active in RMONI, and no single staff group should contribute more than 60% of total logs. By the end of this horizon, compliance is expected to stabilise as a shared responsibility across core, legacy, and contract staff.



2.1 Onboard the New (Feb-Apr 2026)

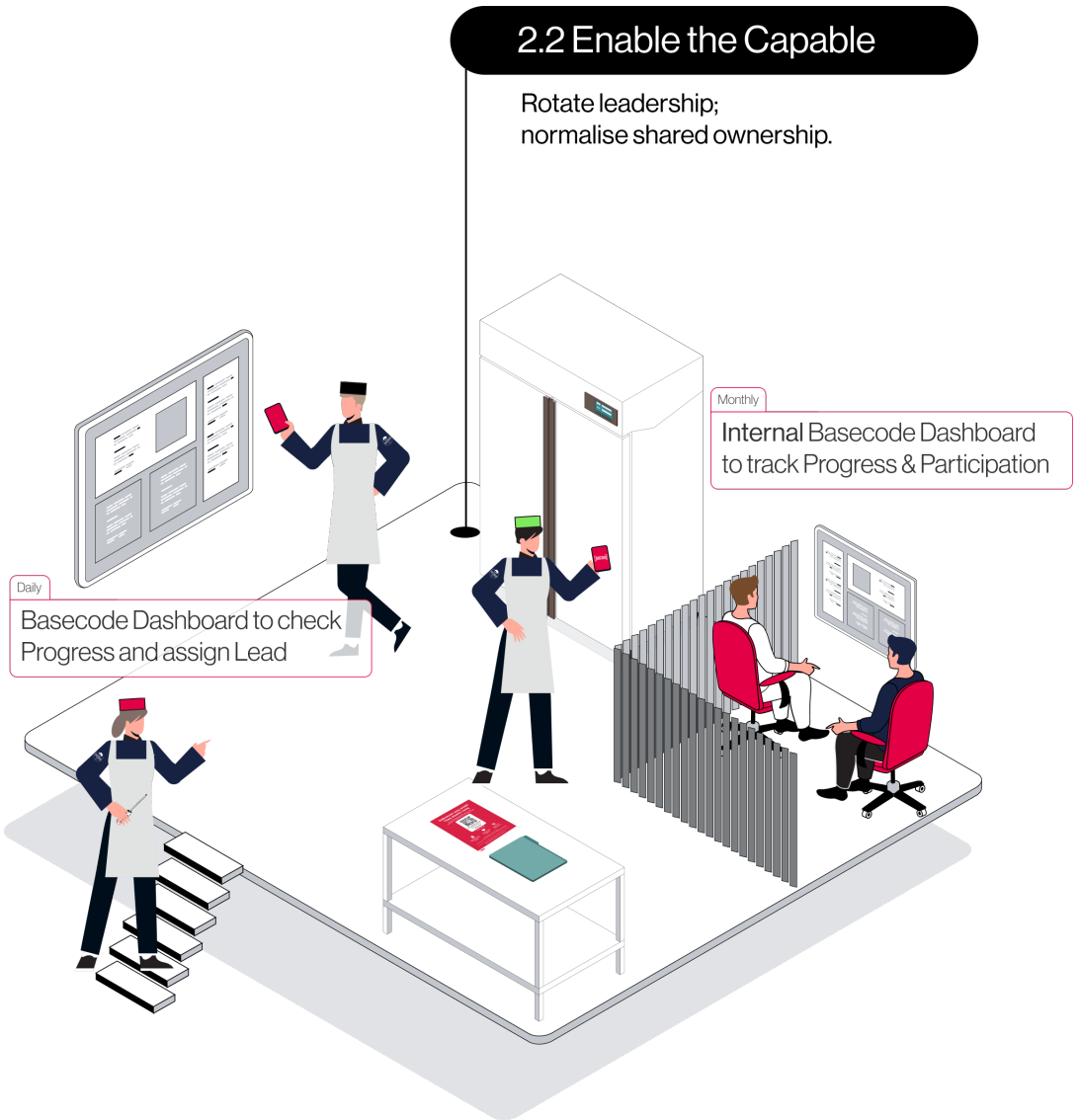
Objective: Ensure new staff adopt BASECODE behaviours from day one.

How: Introduce structured onboarding where trained staff (core, legacy, ambassadors) act as mentors during kitchen demos. Provide immediate access to RMONI, with app installation and task training on the first shift.

Expected Impact: ≥90% of new hires complete onboarding within their first week, with logs recorded independently. New staff become contributors rather than observers.

Measurement: Dashboard tracks new-hire completion rate and first-week logging activity.

Note: The onboarding program is launched in February 2026 to test how new staff respond to RMONI, but it is not a one-off initiative. The format is designed to continue for all future hires, making onboarding a permanent part of BASECODE.



2.2 Enable the Capable (Apr–Jul 2026)

Objective: Distribute responsibility by rotating task ownership and embedding BASECODE into daily kitchen practice.

How: Assign visible rotation of daily compliance leads among core, legacy, and contract staff. Activate BASECODE Ambassadors (recruited from high-performing staff in Horizon 1, as recognition of their contribution) to normalise shared ownership and monitor distribution. Use dashboard data to track whether logs remain concentrated.

Expected Impact: Shared participation across profiles, with no group exceeding 50–60% of total logs. Contract staff become regular contributors, reducing dependency on core staff.

Measurement: Dashboard reports log distribution by profile. Leadership reviews monthly to adjust rotation or provide support where participation lags.

Horizon 3: Aug 2026–Dec 2027

Delegate BaseCode

7.2 BaseCode: Strategic Roadmap

7.2.3 Delegate BaseCode: Horizon 3 (Aug 2026–Aug 2027)

Overview

Horizon 3 shifts focus from shared responsibility to cultural empowerment. By this stage, compliance practices are no longer dependent on structured prompts or a small circle of staff, but become a natural, unprompted reflex across all profiles. The aim is to expand participation beyond the core, legacy, and contract groups to also include freelance and transactional staff. BaseCode should now operate as a cultural anchor—woven into the identity of the kitchen and transferred through mentorship and daily practice.

Exit Criteria (gate to next phase):
Target: maintain ≥90% overall compliance with logs distributed equitably across all staff groups. No single group should account for more than 40% of total checks. Freelance and transactional staff should appear consistently in the logs, indicating that compliance is sustained as a whole-team norm. By the end of this horizon, BaseCode is expected to endure as an embedded culture, resilient to turnover and extending beyond individual roles.

Horizon 3: Aug 2026–Dec 2027

Delegate BaseCode

7.2.3 Delegate BaseCode: Horizon 3

3.1 Invite the Rest (Aug 2026–Jan 2027)

Objective: Extend BaseCode to freelance and transactional staff through accessible, visible practices.

How: Introduce a shared BaseCode station for checks during shifts, enabling seamless participation regardless of contract type. Provide reminders (posters, app prompts) to reduce friction. Pair freelance staff with BaseCode Ambassadors for early exposure during shifts.

Expected Impact: Freelance and transactional staff begin to log independently, closing remaining participation gaps. Compliance becomes inclusive of all staff profiles.

Measurement: Dashboard tracks representation of freelance and transactional staff in logs. Monthly reviews ensure equitable participation.

Horizon 3: Aug 2026–Dec 2027

Delegate BaseCode

7.2.3 Delegate BaseCode: Horizon 3

3.2 Normalise the Practice (Feb–Dec 2027)

Objective: Make compliance an unprompted cultural reflex embedded in the kitchen's rhythm.

How: Rotate leadership across all profiles to decentralise ownership. Use the BaseCode Dashboard daily to assign leads and track progress. Reinforce habit cues (app reminders at start/end of shift, posters at key stations, log reviews at end of shift) until compliance becomes instinctive.

Expected Impact: BaseCode becomes part of the kitchen's identity, as recognisable as its signature dishes. Staff perform checks without prompts, driven by pride, respect, and care.

Measurement: Dashboard consistently reports ≥95% tracking with equitable distribution (no profile >40%). Leadership only intervenes when anomalies occur, indicating cultural autonomy.

2028

Future Vision

Empower BaseCode Culture

[BASECODE]

BASEMENT CHEFS

The vision is simple: BaseCode stops being a program and becomes the culture. In the Basement Chefs' kitchen, compliance isn't a checklist. It's instinct. As natural as adding salt.

The system runs itself. The dashboard shows over 95% tracking. Responsibility is spread across all five staff profiles—core, legacy, new, contract, freelance. No single group carries more than 40% of the checks. That balance is what makes it resilient.

At this point, BaseCode is part of the kitchen's identity. As recognisable as its signature dishes. It passes from Legacy to New Hire, Mentor to Apprentice, without ceremony—because it's just how things are done. Pride, respect, and care sustain it.

What's left is a culture that endures. Turnover doesn't break it. New hires don't dilute it. And it doesn't stay confined to the Basement. It becomes an example for kitchens everywhere: compliance not as control, but as culture.

7.3 BaseCode Dashboard

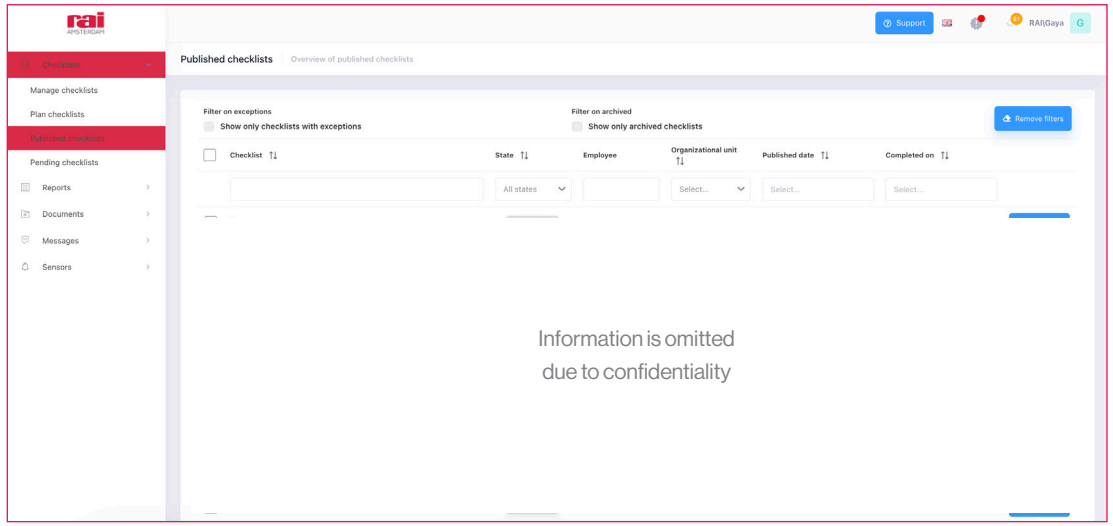


Figure 33. Existing RMONI Dashboard.

7.3.1 Connecting Roadmap to Dashboard

The roadmap sets out the strategic intent: it defines the horizons, the expected outcomes, and the conditions for moving from one stage to the next. Yet strategy on its own does not guarantee change. To translate intent into practice, progress needs to be measured, monitored, and made visible. This is where the dashboard comes in.

The Existing RMONI Dashboard

At present, compliance within RAI is tracked through the standard RMONI dashboard. This system records whether checks are completed, providing leadership with an overview of total compliance rates. While functional, through the research it is revealed that the scope is limited.

The dashboard captures the what: if a check has been logged by which employee but not behaviour profile of them. This gives an opportunity to record whether activity is concentrated in a small group of staff and provide staff themselves with a clear sense of how their contributions relate to the wider team.

This creates several design opportunities for strengthening the link between measurement and cultural practice:

Opaque ownership → Visible distribution:
Current reporting hides who is doing the work. Showing contributions by staff profile enables balanced responsibility.

Transactional reporting → Behavioural feedback:
Compliance is seen as an isolated task. Feedback on collective progress reframes it as a shared practice.

Audit tool → Learning tool:
Today the dashboard supports oversight, not growth. Surfacing trends turns data into a driver of capability and accountability.

Horizon 1 (Sep 2025–Jan 2026)

Cue BaseCode Dashboard

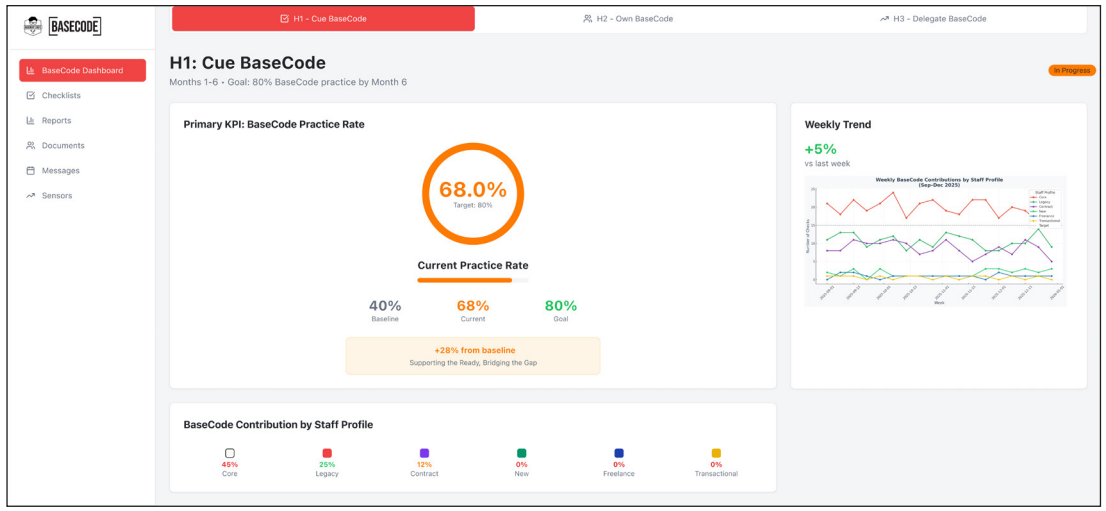


Figure 34. BaseCode Dashboard (H1) Concept Mockup

Horizon 1: Cue BaseCode (Sept 2025–Jan 2026)

The dashboard establishes the baseline and tracks the first signs of adoption. The Primary KPI is the BaseCode Practice Rate, moving from a 40% baseline toward the 80% goal. Weekly trends show whether behaviour is improving week-on-week, while the contribution breakdown highlights who is carrying the early load.

In this stage, most logs come from core and legacy staff. The appearance (or absence) of contract staff in the records signals whether “Support the Ready” and “Bridge the Gap” are working as intended. The dashboard makes visible whether progress is broadening across profiles or remaining concentrated in a few hands.

Horizon 2: Own BaseCode (Feb–Jul 2026)

By Horizon 2, the dashboard shifts focus from overall volume to distribution of responsibility. Practice rate targets rise to 85%, but the real test is whether participation is balanced. The contribution balance and breakdown modules show exactly how logging is spread across core, legacy, contract, freelance, and transactional staff.

Onboarding engagement is tracked separately, ensuring new hires adopt BaseCode behaviours from day one. Success in this horizon is defined not only by hitting compliance percentages, but by embedding shared ownership so that no single group carries more than half of the checks.

Horizon 2 (Feb–Jul 2026)

Own BaseCode Dashboard

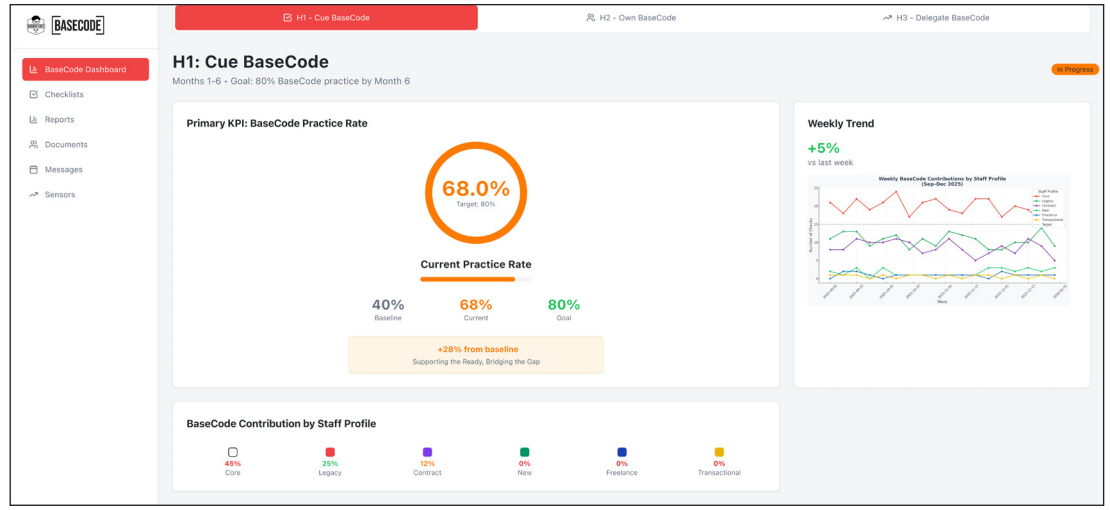


Figure 35. BaseCode Dashboard (H2) Concept Mockup

Horizon 3 (Aug 2026–Dec 2027)

Delegate BaseCode Dashboard

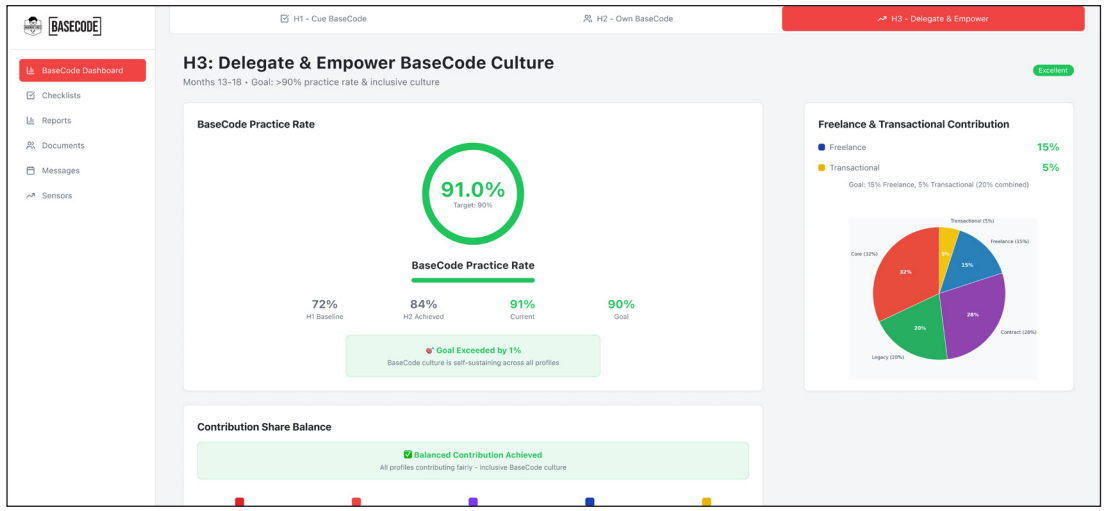


Figure 36. BaseCode Dashboard (H3) Concept Mockup

Horizon 1: Cue BaseCode (Sept 2025–Jan 2026)

In Horizon 3, the dashboard validates whether compliance has become cultural. The target is ≥90% practice rate, sustained across all staff profiles. Importantly, the dashboard now includes freelance and transactional staff, ensuring their contributions are visible and consistent.

Contribution share balance and pie chart visualisations confirm whether responsibility is equitably distributed, with no group exceeding 40% of logs. Hitting this benchmark signals that BaseCode has moved beyond structured prompts and become a self-sustaining practice embedded into the kitchen's identity.

7.4 BaseCode Staff Profile Cards

BaseCode responds to the fact that compliance at RAI is shaped by staff with different levels of capability, opportunity, and motivation (COM-B). A uniform approach risks overloading core staff and disengaging flex staff. BaseCode therefore tailors interventions to staff profiles, offering stakeholders practical tools to track adoption and guide targeted action. The next chapter shows how these profiles are applied in practice.

BASECODE

BASEMENT CHEFS

Intervention Rendering In-Context. Scene Generated via Sora. Edited in Adobe Photoshop

7.4 BaseCode
Staff Profile Cards

Core Staff

Permanent, full-time team members with deep familiarity with RAI's kitchens and BaseCode processes; often set the pace for others.

Story

Natural point of reference for others during shifts; frequently take on logging to "get it done," even if it means carrying most of the load. Risk of burnout or imbalance when delegation doesn't happen.

Motivation

Pride in high standards and smooth service; values being trusted and relied on.

Core Need

Shared responsibility model where logging isn't concentrated solely on them; recognition for sustaining BaseCode culture.

Pain Points

- Tendency to over-own BaseCode tasks, limiting others' opportunities to engage.
- Pressure to log quickly during peak times, skipping coaching moments.
- Either forgets/remembers end-of-day during busy periods.

CODE Framework (Primary Gaps → Probe)

Delegate (sharing tasks) and Empower (mentoring others). Cue moments can support distribution.

Legacy Staff

Former long-term Core staff, often semi-retired, returning part-time to support service. Brings deep cultural knowledge.

Story

Highly trusted in the kitchen and quick to stabilise operations. Can rely on familiar routines, which sometimes means BaseCode isn't prioritised unless prompted.

Motivation

Pride in their legacy and contribution; desire to pass on skills to younger staff.

Core Need

Integration of BaseCode into routines without feeling like extra work; acknowledgement of their role as culture carriers.

Pain Points

- Skepticism toward new tools if perceived as unnecessary.
- May skip logging during short or high-pressure shifts.
- Limited energy for adjusting to new tech/processes.

CODE Framework (Primary Gaps → Probe)

Cue (timely reminders) and Own (reaffirm role in BaseCode culture).

Contract Staff

Fixed-term staff hired for specific periods via external agencies; limited familiarity with RAI's tools/practices.

Story

Capable in safety tasks but rarely initiates BaseCode logging unless directed; expresses uncertainty about ownership—

"I don't think I'm at that level of responsibility yet"

Motivation

Wants to do the job well and fit the kitchen rhythm; responds to clear expectations and visible modelling.

Core Need

Clarity + access: explicit role assignment for BaseCode and App access from Day1 (install/login/demo).

Pain Points

- Unclear role boundaries → assumes Core will log.
- Access/onboarding gaps limit opportunity to log.
- Logging becomes inconsistent under pressure without in-shift prompts.

CODE Framework (Primary Gaps → Probe)

Own (role clarity) and Empower (access/skills). Cues can help consistency.

Freelance Staff

External hires with temporary, engagements for events or peak periods; minimal familiarity with BaseCode.

Story

Highly variable in skill and experience; can contribute effectively when paired with strong in-shift guidance.

Motivation

Pride in high standards and smooth service; values being trusted and relied on.

Core Need

Clear and quick orientation; easy physical access to tools and mentors.

Pain Points

- Very limited exposure to BaseCode.
- Disconnection from longer-term compliance goals.

CODE Framework (Primary Gaps → Probe)

Cue (frequent prompts) and Empower (confidence via guided first checks). Delegate to suitable mentors.

Core Staff
Capable and motivated but often carry too much of the logging. The strategy distributes tasks to reduce overload and uses dashboards to check that ownership is shared across roles.

Legacy Staff
Experienced and reliable, but may slip into old routines when expectations are unclear. Prompts and visible task allocation help maintain consistency without over-reliance.

Contract Staff
Skilled but not fully onboarded. They do tasks but avoid logging without clear expectations. Onboarding and task assignment increase reliability.

Freelance Staff
Experienced but task-focused. Compliance should be built into workflows with prompts at the point of use so it becomes part of the job, not an add-on.

7.4 BaseCode
Staff Profile Cards

Transactional Staff

One-off or occasional shift workers, temporary hires primarily motivated by short-term income rather than long-term kitchen culture.

Story

Drops into service with minimal context. Focused on completing assigned tasks quickly; BaseCode may be outside their perceived responsibility unless explicitly included.

Motivation

Wants to finish the shift efficiently and meet basic expectations.

Core Need

Clear, minimal BaseCode role that fits within their short task list.

Pain Points

- No context on BaseCode's purpose or process.
- Rarely included in logging assignments.
- Limited incentive to adopt practices beyond immediate tasks.

CODE Framework (Primary Gaps → Probe)

Cue (direct prompts) and Empower (simple, one-step instructions).

BaseCode Ambassadors

Selected staff who act as peer models for BaseCode.

Story

They normalise logging by making it visible in daily routines and share insights from the floor with leadership.

Motivation

Pride in setting standards and being trusted to shape kitchen culture.

Core Need

Recognition for their ambassador role and tools to reinforce practices informally.

Pain Points

- Risk of being seen as enforcers rather than peers.
- Added responsibility without formal authority.
- Fatigue if not supported by leadership.

CODE Framework (Primary Gaps → Probe)

Own (visible role clarity) and Delegate (enable others to share responsibility).

New Staff

Recently hired permanent team members; motivated but unfamiliar with RAI's kitchen systems and BaseCode practices.

Story

Newly joined team members still unfamiliar with RAI's systems. Eager to contribute but unfamiliar with BaseCode processes.

Motivation

Fit into the kitchen rhythm, feel integrated within the team.

Core Need

Clear onboarding with app access, role assignment, and hands-on demo from Day 1.

Pain Points

- Uncertainty about responsibilities regarding BaseCode.
- Lack of system access slows adoption.
- Reliance on others for reminders.

CODE Framework (Primary Gaps → Probe)

Cue (timely reminders) and Empower (skills, access, confidence).

Transactional Flex Staff
Capable and motivated but often carry too much of the logging. The strategy distributes tasks to reduce overload and uses dashboards to check that ownership is shared across roles.

BASECODE Ambassadors
A new role introduced in this strategy, ambassadors act as peer models and multipliers. They normalise BASECODE behaviours, offer informal reminders, and help bridge insights from kitchen practice to leadership.

New Staff
Skilled but under-onboarded. They do tasks but avoid logging without clear expectations. Onboarding and task assignment increase reliability.

7.5 CODE Meeting Framework

While the roadmap sets direction and the dashboard provides visibility, chefs also need a way to act on the data in practice. The **CODE Meeting Framework** was developed as a structured tool for guiding team discussions about compliance behaviours. It distils the research derived from field observations into a format that can be used directly in shift briefings or review meetings.

The framework works by combining the persona cards with four diagnostic lenses: **Cue, Own, Delegate, Empower (CODE).**

This structure enables leadership to move beyond general observations toward targeted interventions. If the dashboard shows, for example, that a profile is over-represented in logs, the CODE framework helps unpack whether the issue lies in prompts (C), ownership (O), delegation (D), or empowerment (E).

The process is supported by compliance ambassadors, who work on the kitchen floor and provide insight into daily practices. Leadership can use ambassadors' observations to populate the framework during meetings, and escalate patterns to the compliance officer when needed.

In this way, the CODE framework functions as a bridge between measurement and action: it ensures that insights from the dashboard are translated into practical steps that chefs can use to rebalance responsibility, build capability, and sustain BaseCode as a shared cultural practice.

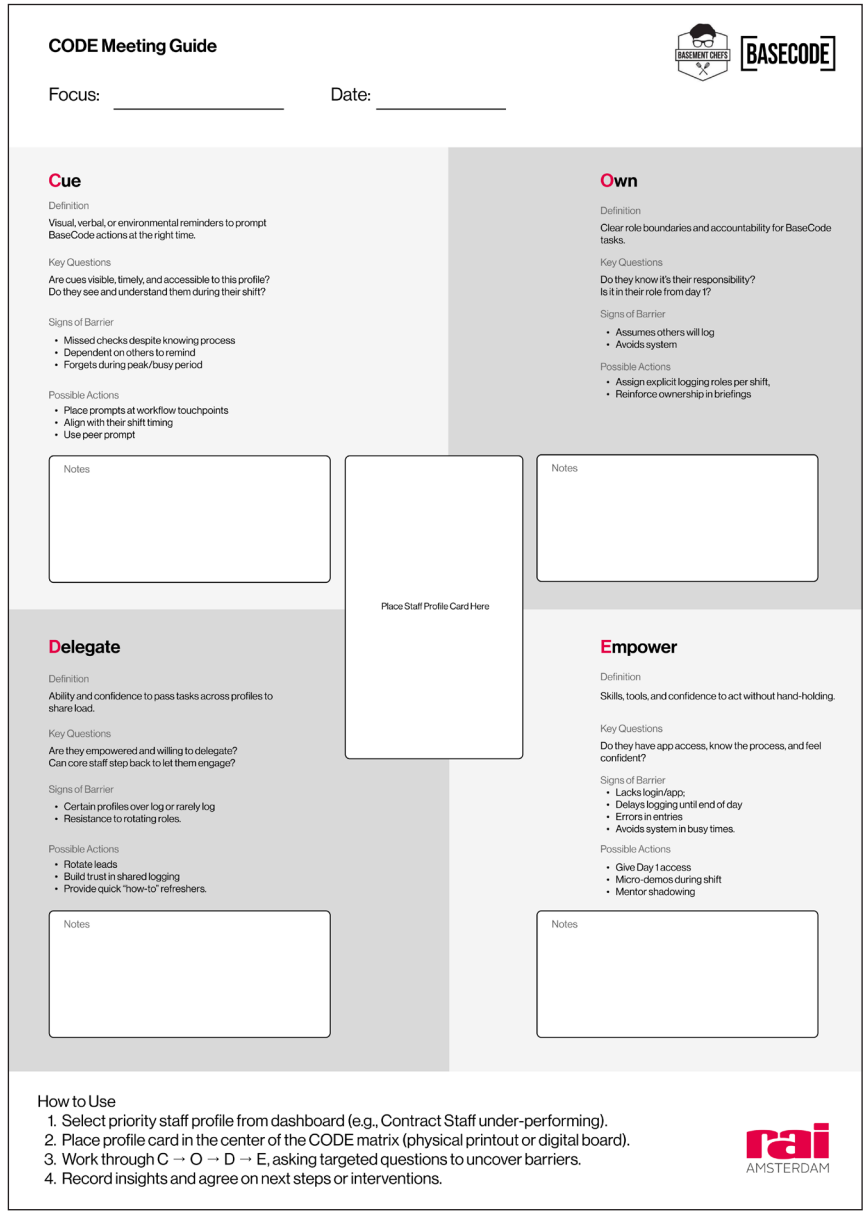


Figure 38. CODE Framework Meeting Guide

7.5 CODE Meeting Framework

C

Cue

Definition

Visual, verbal, or environmental reminders to prompt BaseCode actions at the right time.

Key Questions

Are cues visible, timely, and accessible to this profile?
Do they see and understand them during their shift?

Signs of Barrier

- Missed checks despite knowing process
- Dependent on others to remind
- Forgets during peak/busy period

Possible Actions

- Place prompts at workflow touchpoints
- Align with their shift timing
- Use peer prompt

Notes

Cue: Are visible prompts embedded in their daily flow? Do staff encounter reminders at the right time, or are checks being missed during busy periods?

O

Own

Definition

Clear role boundaries and accountability for BaseCode tasks.

Key Questions

Do they know it's their responsibility?
Is it in their role from day 1?

Signs of Barrier

- Assumes others will log
- Avoids system

Possible Actions

- Assign explicit logging roles per shift.
- Reinforce ownership in briefings

Notes

Own: Do they see BaseCode tasks as their responsibility from Day 1? Or do they assume others will log for them?

D

Delegate

Definition

Ability and confidence to pass tasks across profiles to share load.

Key Questions

Are they empowered and willing to delegate?
Can core staff step back to let them engage?

Signs of Barrier

- Certain profiles over log or rarely log
- Resistance to rotating roles.

Possible Actions

- Rotate leads
- Build trust in shared logging
- Provide quick "how-to" refreshers.

Notes

Delegate: Can responsibility be rotated and shared? Are they empowered to step back and allow others to contribute?

E

Empower

Definition

Skills, tools, and confidence to act without hand-holding.

Key Questions

Do they have app access, know the process, and feel confident?

Signs of Barrier

- Lacks login/app;
- Delays logging until end of day
- Errors in entries
- Avoids system in busy times.

Possible Actions

- Give Day 1 access
- Micro-demos during shift
- Mentor shadowing

Notes

Empower: Do they have the skills, access, and confidence to act without supervision? Are there barriers like lack of logins, app fluency, or errors in recording?

BASECODE

BASEMENT CHEFS

7.6 Towards a Culture of Compliance-as-Identity

BASECODE is more than a set of tools; it is a path towards reframing compliance as part of professional identity. Fieldwork showed that staff valued safety but disengaged when logging was treated as "extra work." What sustained action was not rules or reminders, but when compliance aligned with pride, belonging, and what it means to be a Basement Chef.

This is the shift from doing compliance to being compliant:

- Not "I log because I have to" but "logging is part of how I work."
- Not an individual burden, but a shared marker of professionalism.
- Not fragile rules, but practices embedded in team identity.

Why does this matter?
Because identity outlasts turnover and tool updates. Systems will change; new staff will arrive. But when compliance is tied to who people see themselves as, it becomes self-sustaining.

BaseCode offers tools, a pathway, and a new language for compliance. But what does this mean beyond the Basement Chefs? How does it speak back to theory, practice, and the wider field of design?

To answer this, the next chapter steps back into reflection, discussing the implications, contributions, and limitations of the work.

Chapter 8

Discussion

This chapter reflects on findings and contributions. It discusses how compliance can be reframed as culture, the theoretical advances made (ownership and identity as determinants), and the practical implications for kitchens, organisations, and design practice. Limitations and directions for future research are also outlined.

8.1 Purpose and Research Questions

This thesis explored how compliance in hospitality kitchens can shift from a top-down requirement to a culture that is shared, sustained, and embedded in daily practice. The research was conducted with RAI Amsterdam's Basement Chefs, focusing on food safety compliance as a case.

The study was guided by three questions:

- **How can compliance behaviours in hospitality kitchens be understood beyond individual awareness?**
- **What design interventions can distribute responsibility for compliance across diverse staff profiles?**
- **How can compliance practices be embedded as culture rather than enforced as control?**

Chapters 4–7 addressed these questions through fieldwork, literature review, and design interventions. The roadmap, Base-Code Dashboard, and CODE Meeting Framework are the main outcomes. This chapter discusses their implications for the research questions, the literature, and practice.

8.2 Interpretation of Key Findings

The findings fall into three themes: moving from awareness to action, distributing responsibility, and using design infrastructure to sustain culture.

8.2.1 From Awareness to Action

Staff knew the rules but struggled to apply them consistently. The roadmap and CODE framework targets this through cues, ownership, delegation, and empowerment. The research findings allude that compliance behaviour improves when the environment makes the right behaviour the 'easiest' behaviour.

8.2.2 Distributing Responsibility

Compliance was concentrated in core and legacy staff, making the system fragile. The roadmap set limits on this: no profile over 50–60% of logs in Horizon 2, and no more than 40% in Horizon 3. The dashboard exposes imbalances which will empower teams to address them.

8.2.3 Design Infrastructure as Culture

The roadmap set the path, the dashboard tracked progress, and the CODE framework guided action. Together they turned compliance into something visible, discussable, and actionable. These findings suggest culture change depends less on training sessions and more on tools and routines that embed behaviour into daily work.

8.3 Validation and Stakeholder Reflections

Validation took place in two stages: with the Executive Chef and Compliance Officer, and with the kitchen leadership team. Both reviewed a draft roadmap before BaseCode was fully developed. This timing was a limitation but allowed feedback to refine the final concept and ensure practical relevance and usefulness.

8.3.1 Executive Chef and Compliance Officer

- They saw the behaviour profile cards as useful beyond compliance: **“We can use this in different projects.”**
- They stressed the need for a clear kickoff with key stakeholders, covering why checks matter, how to do them, and how to use the app.
- They asked for a digital dashboard that shows who is doing checks and who isn’t, not just total completion.
- The Compliance Officer advised framing the system in quality terms and linking it to PDCA (Plan Do Check Act), noting that “compliance” language can be limiting. This feedback directly informed the decision to frame the system as BaseCode rather than a compliance programme.
- Both highlighted flex staff as a group needing stronger support with the basics: without clear onboarding and training, their limited familiarity can create vulnerabilities.
- They also set a realistic time horizon of two years: **“When it is not working in two years you have to do something else.”**

8.3.2 Kitchen Leadership Team

They endorsed the roadmap’s direction and confirmed a decided moment to launch. Training should be shared across platforms: one explains the “why,” one the “what,” and one the “how.”

They recommended adding recognition into the process: **“team shout-outs… based on facts”** to make participation visible and motivating.

They highlighted the need for shared access points so freelancers and transactional staff can log without relying on personal devices: **“Better to have a tablet on the wall.”**

They supported compliance ambassadors on the floor to provide immediate guidance and keep adoption practical during daily operations.

Why this was still useful (despite being a draft)

Validating the draft surfaced concrete adoption risks (first-login and access), location effects (line-of-sight prompts), and reinforcement tactics (fact-based shout-outs) early enough to build them into BaseCode and the dashboard before the launch.

8.4 Theoretical Contributions

This thesis advances how compliance is understood by reframing it as a design challenge rather than a matter of training or enforcement.

Compliance as context, not awareness

Much of the literature treats non-compliance as a problem of insufficient knowledge or weak motivation. This study shows instead that awareness was not the barrier; the surrounding context was. The CODE framework illustrates how cues, ownership, delegation, and empowerment can shift compliance from conscious effort to embedded habit.

Compliance as collective, not individual

Earlier research highlights the fragility of systems where responsibility rests on a few individuals. This project demonstrated that thresholds, distribution metrics, and visibility tools such as the dashboard can actively spread responsibility across diverse staff profiles, making compliance more resilient to turnover and workload variation.

Compliance as culture, not control

Tools in compliance are often designed for audit and oversight. Here, strategic design was used to transform them into cultural infrastructure — tools that make compliance visible, discussable, and connected to professional pride and identity.

Building on this reframing, the thesis contributes directly to behavioural theory. In high-turnover, fast-paced kitchens, the critical point of compliance breakdown was not awareness or even intention, but ownership and identity. Staff consistently valued food safety but disengaged when responsibility was diffused or when flex workers did not perceive logging as part of their role.

This extends behavioural models in two ways. First, it surfaces ownership as a determinant not explicitly captured in frameworks such as COM-B and IBM: compliance depends on whether individuals see the action as theirs to perform. Second, it highlights the power of identity-based framing: positioning compliance as a marker of professionalism and pride is as influential as environmental cues or training.

In this way, the study bridges behavioural and strategic design. Behavioural models clarified why intention–action gaps emerged; strategic design provided the scaffolding for how those gaps could be closed over time. Together, they show that compliance can be deliberately reframed and embedded as a cultural practice rather than imposed as a procedural obligation.

8.5 Practical Implications

The research points to several implications at different levels:

Basement Chefs

BaseCode gives the team a structured way to see and share responsibility for compliance. By making contributions visible and linking checks to pride in work, it supports chefs in embedding these practices into their daily routines.

RAI Amsterdam

The roadmap offers management a staged approach to guide change, while the dashboard and CODE framework create opportunities to track and discuss progress. Together, these tools can help leadership keep compliance relevant and connected to kitchen practice.

Hospitality organisations

The approach highlights ways to work with diverse staff groups in large event and hospitality settings. Using staff profiles, participation thresholds, and visible prompts can help distribute responsibility more evenly across core, contract, and freelance staff.

Design practice

The project aims to show how strategic design and behavioural design can be used in conjunction. Strategic design staged change over time, while behavioural design shaped the conditions for action. Together, they suggest how design can contribute to embedding organisational practices in a sustainable way.

Looking back across the work, my role was to draw out the deeper story: compliance is less about control, more about identity in this context.

While BaseCode has proven feasible, its long-term survival depends on a few enabling conditions.

Resources: Sustaining BaseCode will require ongoing attention keeping ambassadors engaged, updating dashboards, and ensuring logging tools are always accessible. These are not one-off efforts; they need to be maintained as part of everyday operations.

Risks: The biggest threats are staff turnover and digital fatigue. If new hires aren't consistently onboarded, or if the dashboard falls out of use, behaviours can erode over time.

Enablers: What will make BaseCode stick is embedding it into existing structures: introducing it on day one of onboarding, making progress visible through dashboards, and celebrating contributions through recognition moments like team shout-outs. Leadership support and ambassador presence on the floor will help signal that BaseCode is not a temporary initiative, but part of professional practice.

Taken together, these conditions show that BaseCode is not just feasible in the short term, but also viable as a cultural practice that can adapt and endure over time.

8.6 Limitations and Future Studies

This study had a few limitations that shape how the findings should be read.

Timing of validation: Feedback from the Executive Chef, Compliance Officer, and kitchen leadership team was gathered on draft versions of the roadmap and tools. This meant BaseCode was not validated in its final form. Future research could follow the full rollout and examine how the tools perform in daily use.

Single context: The project focused on the Basement Chefs at RAI Amsterdam. This provided depth but also means the findings are context-specific. Future studies could test the approach in other kitchens or in different parts of the hospitality sector to explore transferability.

Timeframe: The work was conducted within a thesis period, which limited long-term observation. Further research could study adoption over multiple years, tracking whether cultural change is sustained through turnover and seasonal cycles.

Dependence on organisational support: The roadmap and tools assume active involvement of leadership and compliance ambassadors. Their role is central, and without consistent support the system may be harder to maintain. Future research could explore how these roles adapt in settings with less management capacity.

Taken together, these limitations highlight where further study is needed. Longer-term and broader applications would strengthen understanding of how compliance can be embedded as culture and how compliance reframings such as BaseCode might scale across different organisational contexts.

This discussion reflected on how the roadmap, dashboard, and CODE framework respond to the research questions, and how they contribute to theory and practice. The validation sessions highlight the importance of grounding design outputs in daily realities, while the limitations highlight where further study is needed.

The central contribution is a reframing: compliance can be approached not as a checklist or control mechanism, but as a culture that is designed, shared, and sustained. This opens the way for future work to test how BaseCode performs over time and how similar approaches might be adapted in other contexts.

The next chapter concludes the thesis by summarising the research journey, its outcomes, and its significance.

We have followed the journey from awareness to action, from behaviour to culture. Along the way, we surfaced gaps, designed interventions, and built strategies that turned compliance into something visible, distributed, and shared. The conclusion brings these threads together, concluding the story and pointing to what lies ahead.

Chapter 9

Conclusion

This chapter reflects on findings and contributions. It discusses how compliance can be reframed as culture, the theoretical advances made (ownership and identity as determinants), and the practical implications for kitchens, organisations, and design practice. Limitations and directions for future research are also outlined.

This thesis examined how food-safety compliance in hospitality kitchens can shift from a fragile, top-down requirement to a shared cultural practice. The study focused on RAI Amsterdam's Basement Chefs, where compliance was understood but often postponed or omitted under service pressure.

The main research question was answered by identifying three drivers of omission:

- Behavioural: urgency of production overrode logging, even when staff valued safety.
- Structural: accountability was diffused, with core staff carrying the load while flex staff excluded themselves.
- Environmental: tools such as RMONI were misaligned with workflow, with access friction and low salience reducing follow-through.

The sub-questions confirmed these dynamics: urgency shaped attention; unclear roles weakened ownership; and tool placement and usability determined whether checks were logged at all.
To address these barriers, the project developed BaseCode, a system that reframes compliance as culture. It consists of:

- A roadmap that stages change over time.
- A dashboard that makes contributions visible and balanced.
- Staff profile cards that tailor interventions to different roles.
- The CODE framework that links data back to reflection and action.

Together, these tools shifted compliance from being a burden on a few to a responsibility shared across staff profiles, anchored in pride and professional identity.

The contribution of this thesis lies in showing that compliance can be deliberately designed as culture. Behavioural design clarified why the intention–action gap persists; strategic design staged how to close it. BaseCode demonstrates how compliance can be sustained not by control, but by cues, ownership, and identity.

Although rooted in the Basement Chefs' context, the approach offers lessons for other high-turnover, high-pressure environments. BaseCode illustrates how this shift can begin, and the challenge ahead is to test and adapt it so compliance becomes not only what kitchens do, but part of who they are.

Chapter 10

Personal Reflection

Working on this thesis has been both an academic challenge and a personal journey. Entering the kitchens of RAI Amsterdam, I was confronted with a fast-paced environment where compliance was not an abstract policy but a lived, daily tension. Observing and working alongside chefs made me aware of how fragile systems can be when they are not aligned with practice, and how design can create tools that respond to lived realities rather than impose abstract solutions.

Because this work took place with chefs, it was also a very different kind of collaboration than I had experienced before. Workshops and activities often required me to adjust on the spot. I found myself reiterating and reshaping tasks to match how chefs think and respond — with more comfort in speaking than in writing, and with time pressures that rarely matched the workshop agenda. Improvisation became a core skill: adapting methods in real time, making space for discussion when writing exercises failed, and recognising that what works in theory often looks very different in practice. These experiences reminded me that research methods are not neutral tools but must be flexible to the people and contexts they serve.

As a researcher, I often had to shift roles. At times I was a sensemaker, trying to interpret patterns in the midst of service chaos. At other times, I became a translator, framing those patterns in ways that made sense to both chefs and academic audiences. I also had to be a facilitator, creating spaces for co-framing and discussion, and occasionally a challenger, pushing existing assumptions about compliance and culture. Balancing these roles was not always straightforward, but it gave me a deeper understanding of the multifaceted nature of design research.

This project also taught me about my own practice. I learned the value of iteration, not only in design outputs but in framing problems and refining research approaches. I discovered how much insight comes from listening — to participants, to supervisors, and to the dynamics of the environment itself. And perhaps most importantly, I learned that embedding change requires patience and humility: culture cannot be designed in isolation, but only in collaboration with those who live it every day.

Looking back, this thesis has reinforced my conviction that design can operate at the intersection of behaviour, structure, and culture. It has given me tools, but also questions, that I will carry forward into my professional practice.

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