Design Science

Behavioural design as a process ecosystem: a review and synthesis

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Abstract

Behavioural design processes have proliferated in recent years across a diverse set of fields including policy, product development and health. However, this diversity of perspectives also increases ambiguity regarding which (and when) processes should be enacted, which hinders research and practice across fields. This drives two research questions: (1) *How are behavioural design processes currently framed, described, and enacted?* and (2) *How can we consistently understand commonalities and differences across behavioural design processes?* In response to these questions, we adopt a critical interpretive synthesis (CIS) approach, reviewing 12 processes from academic and practitioner sources selected through purposive sampling and analysed using a theory-informed coding protocol. Through interpretive synthesis, we re-characterise behavioural design in terms of an ecosystem of distinct but complementary processes rather than its typical presentation in fixed sequences of steps. This increases behavioural design's ability to respond to different degrees of uncertainty and dynamism in the problem and solution as well as its ability to reflect diverse assumptions about uncertainty, iteration, outcomes and practitioner capability. This research supports an important and developing interdisciplinary area by bringing design process into a design science research context through which many of these topics can be further discussed and developed.

Keywords: Behavioural design, Behaviour change, Design process, Design methodology, Review, Intervention design

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1. Introduction

The realisation of behavioural influence or change through designed interventions is a growing field with increasingly important societal and industrial implications. Key to this growth has been the emergence of a distinct set of intervention development practices, complete with specialised processes, methods and actors (Michie, Atkins & West 2015; Voorheis *et al.* 2022). These practices, which draw on a diverse range of disciplinary insights and perspectives, have come to be broadly know as 'behavioural design' (This term broadly aligns with some significant previous works in this area and recognises the key interaction between implementation science, behavioural science and design essential to many others. Khadilkar & Cash (2020) define it as having the goal to explicitly and ethically realise positive behaviour, desired by both the individual and society, where the object of design is behaviour itself, which is explicitly understood and designed for using behavioural theories brought into effect with the help of interventions (in various embodied

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forms). This includes, but goes beyond, behaviour change.). However, the overarching label of behavioural design belies significant underlying differences in perspective and approach (e.g. emphasising deductive versus abductive logic or linear versus iterative processes), driving the need for practice-focused research in this area (Bay Brix Nielsen, Cash & Daalhuizen 2024).

To date, behavioural design practices have largely been organised around design processes, such as Michie *et al.*'s (2015, p. 25) widely recognised 'behaviour change intervention design process'. These processes typically offer an overarching conceptual frame and approach, coupled with specific steps and directional guidance for achieving good outcomes. However, despite common features, there are also significant apparent variances across behavioural design processes (Voorheis *et al.* 2022; Bay Brix Nielsen *et al.* 2024). For example, Michie *et al.*'s (2015) and Fogg's (2009) processes share similar overall steps but arrange them differently, and the degree to which processes embrace iterative refinement is quite variable. In addition, while experimental or scientific processes typically receive extensive descriptions, design and development processes tend not to be reported at the same level of detail (Bay Brix Nielsen *et al.* 2024, p. 516). Further, the relative effectiveness of current processes is still debated (Hagger & Weed 2019; Cash, Kreye & Browning 2026) and behavioural design is rife with accounts of unexpected outcomes and emergent effects (Michie *et al.* 2015; Kelly & Barker 2016).

While some work has begun to bridge behavioural science and design (Voorheis *et al.* 2022), efforts to resolve these conflicts have largely been stymied by a general lack of theory or empirical accounts of issues that explicitly focus on comparing and synthesising behavioural design processes themselves, leaving key attributes largely implicit. As a result, despite the growing number and prominence of processes, behavioural designers' struggles to systematically select and employ problem-solving approaches hamper their ability to consistently achieve three forms of successful outcomes, as described by Cash *et al.* (2026): *during-project* success (the explainability of the process and resultant intervention (Michie *et al.* 2015, p. 202)), *end-project* success (the demonstration of intervention effects, often via randomised, controlled trials (Schmidt and Stenger, 2021) and *post-project* success (the longer-term emergence of desired target behaviours (Bay Brix Nielsen *et al.* 2024). This makes understanding of processes critical and provides the underlying motivating for our research questions (RQs): (1) *How are behavioural design processes currently framed, described, and enacted?* and (2) *How can we consistently understand commonalities and differences across behavioural design processes?*

To answer these questions, we conducted a critical interpretive synthesis (CIS) of current behavioural design processes to interrogate how behavioural design processes are framed, described and enacted. This inquiry complements similar work such as the consolidated framework for implementation research (CFIR) (Damschroder *et al.* 2009) and its recent update (Damschroder *et al.* 2022), which has established an overarching typology of terms related to theory building in implementation research. As such, in the work that follows we (i) describe a structured analysis of current processes and practices, (ii) identify areas of deficit and/or conflict, (iii) develop a theory-based account of how behavioural design processes can be coherently understood in relation to one another and (iv) propose salient areas for future research. While this approach facilitates a critical analysis and interpretation of current processes, our intent is explicitly *not* to identify one

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preferred or best option. Instead, we propose the need to conceptually reframe behavioural design in light of its dynamic, uncertain and ecosystemic nature, with the goal of helping behavioural design researchers bridge insights from various disciplines to inform when and how to apply particular approaches when solving practical behavioural design challenges.

In this review, we follow previous work (e.g. Khadilkar & Cash 2020) in using the term 'behavioural design' to refer to design processes in which desired behaviour is the (or at least one) objective, and in which behavioural science supports core process stages (e.g. framing, understanding and intervention development). Importantly, this definition distinguishes behavioural design processes from (i) behavioural theories without process guidance (e.g. theory of planned behaviour (Ajzen 1991), (ii) taxonomies of intervention types or influence strategies alone (e.g. the cognitive bias codex (Benson 2016), (iii) general design processes that do not explicitly engage behaviour as a goal or behavioural science as a method and (iv) broader behaviour change processes that offer a limited view of design (shifting existing systems only rather than creating desired futures more broadly). Thus, only processes where behavioural considerations shaped the structure and progression of design activity itself, rather than serving solely as background theory, were included.

2. Background

While behavioural design-specific process theory remains sparse, general design processes provide a reasonable basis for our analysis. Design processes typically frame and transform inputs into outputs at various levels of abstraction and in various configurations (e.g. from individual activities, to process steps and to whole processes)(Dorst 2015; Ulrich & Eppinger 2015. They also tend to operate within a dynamic context, which reflects the evolving characteristics of and relationships between processes, problems, solutions and contexts (e.g. see Dorst & Cross 2001). In practice, specific process structures and combinations of steps are then chosen in accordance with the nature of inputs/outputs and context (Andreasen, Thorp Hansen & Cash 2015); for example, different approaches might be informed by the projected solution's domain (e.g. healthcare) and related requirements, and/or degree of situational uncertainty. Thus, design processes are informed by inputs (e.g. the problem frame or disciplinary domain) and projected outputs (e.g. in accordance with known constraints) and enacted in contexts that may change dynamically over time. Notably, however, while many design processes are explicitly conceptualised with respect to their intended output (e.g. product or service design processes that result in products and services, respectively (Ulrich & Eppinger 2015), behavioural design processes tend to employ behaviour change techniques or similar behaviour changing principles as problem-solving mechanisms but result in outputs that can be embodied by a wide range of physical outputs such as communications, interfaces and policies (as in Michie *et al.* 2015). This variable relationship between contextual realities and output specifications – plus the fact that behavioural design has historically recognised the importance of grappling with issues of context heterogeneity and generalisation more rigorously (Bates & Glennerster 2017; Bryan, Tipton & Yeager 2021) – suggests that a more explicit inclusion of context considerations within these problem-solving processes is both necessary and useful.

Design processes also exist within wider team or organisational contexts, which influence their progression and potential for success (Ulrich & Eppinger 2015;

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Harvey & Kitson 2016; Daalhuizen *et al.* 2019). For example, agile processes often chain multiple sub-processes over time through the use of tight, frequent feedback loops, whereas systems approaches might tend to coordinate processes simultaneously but at different levels of granularity. Design processes also constitute only one part of a wider set of professional and disciplinary practices enacted by practitioners (Daalhuizen *et al.* 2019; Eklund, Aguiar & Amacker 2022), which inform choices concerning what and who to involve, or in what way, and therefore shape what is viewed as possible or even conceivable (Schmidt 2020). Further, these processes and methods are often ambiguous with regard to how exactly they should be enacted; as a result, in practice they leave significant scope to the interpretation and 'staging' of the actors, informed by context, values and mindsets (Andreasen *et al.* 2015). This is also true for related frameworks such as the CFIR and other implementation science approaches, which articulate how interventions are implemented, adapted and sustained in complex conditions. These processes can generate useful outcomes that expand beyond their focal output, such as fostering wider learning. However, while such approaches are useful to structuring evaluation, identifying determinants of success, and guiding implementation strategies, they tend to focus on the implementation and translation of interventions rather than the design process through which behavioural interventions are initially framed, developed and refined.

Connecting these considerations, we can consolidate general process understanding into an initial conceptual framework, as illustrated in Figure 1. Here, processes are positioned with respect to (i) their inputs and outputs over time,

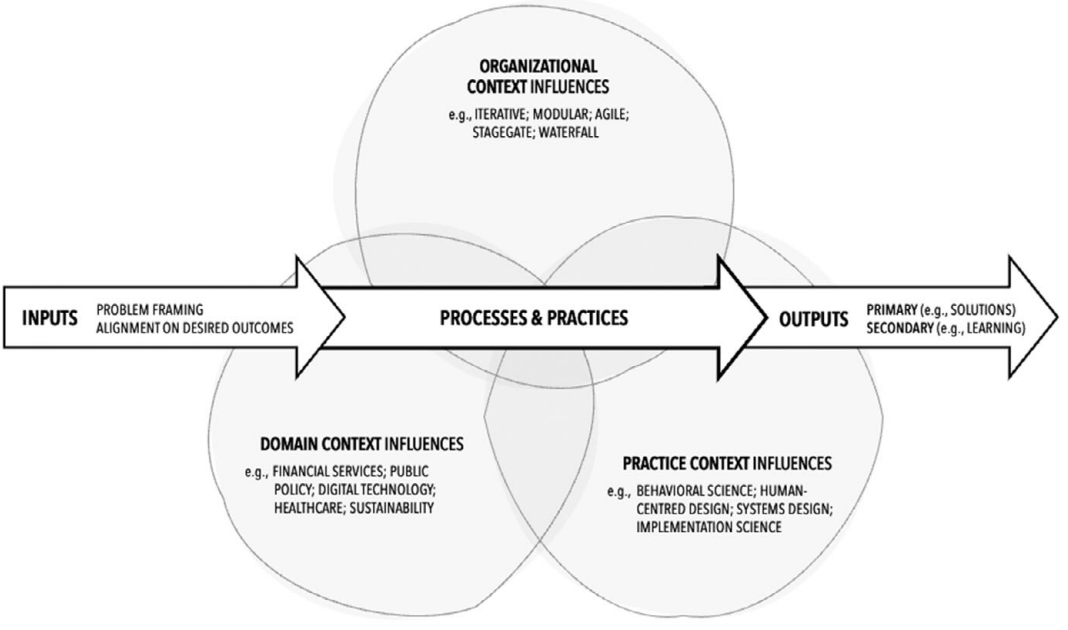


Figure 1. Initial conceptual framework highlighting relationships between behavioural design processes and practices (including initial inputs and resulting outputs) and organisational, domain and practice context influences.

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(ii) their interaction with contexts that shape critical aspects of work (e.g. constraints, workflow and epistemological grounding) and (iii) their enactment as part of a wider set of practices. This conceptual framework served as a sensitising lens (Blumer 1954) which informed our coding and interpretation but remained open to revision as themes emerged during the synthesis.

3. Methodology

We determined the CIS approach (Dixon-Woods *et al.* 2006b) to be particularly well suited to our research questions due to its ability to align an interdisciplinary set of methods, tools and perspectives. This was particularly important given the fragmented and conceptually diverse landscape of behavioural design processes but also in light of behavioural design's limited theoretical maturity and the heterogeneous format of available source materials (e.g. toolkits, grey literature and academic process models). Unlike aggregative review methods, CIS supports theory building through interpretive synthesis, enabling the generation of synthetic constructs and conceptualisations to reconfigure the understanding of a given topic by acknowledging processes as socially situated artefacts and prioritising conceptual coherence over broad coverage. For example, CIS has proved useful in a range of studies that review methodologically diverse data which may come from a variety of fields (Perlman, Ben-Sheleg & Ellen 2026), including several studies that have addressed related topics such as value in process evaluation (French *et al.* 2022), how behavioural science theory has been operationalised (Patey *et al.* 2018) and understanding of participatory action research (Corrado *et al.* 2020).

Our choice of CIS was further informed by three key conditions: (i) a lack of process-focused theory prohibits clear systematic sampling; (ii) behavioural design processes are often under-described in academic literature, or exist only as practice-facing materials (e.g. toolkits) and (iii) many processes are bespoke to specific organisations, which requires interpretive engagement to generalise. Indeed, a key feature of CIS is its appreciation of the reviewer's interpretive stance (Dixon-Woods *et al.* 2006a); as such, this paper's 'authorial voice' is thus highly informed by the complementary disciplinary perspectives and professional experiences of the author team, who collectively bring deep expertise in behavioural design, design research, process theory and behavioural design practice spanning academic, industry and policy contexts. This multi-perspectival lens enabled us to interrogate tacit assumptions and surface underarticulated dimensions of practice, and construct synthetic concepts that bridge disciplinary boundaries. We position our interpretation as a theoretically grounded, yet pragmatically useful, reconfiguration of behavioural design process to help inform future design science research.

3.1. Sampling

We employed a purposive sampling strategy guided by theoretical and practical inclusion criteria (Onwuegbuzie & Leech 2007). First, we identified processes that aligned with the theoretical scope and definition of 'behavioural design' (as defined above). Second, we excluded models, frameworks and methods that did not conform to our general theoretical understanding of design processes (as in Figure 1). Finally, we excluded processes that did not fulfil the practical criteria

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of being: (i) employed within the field (rather than as a bespoke or internal process) and (ii) accessible, such that we could carry out in depth analysis of basic and supporting documentation and/or publications.

3.2. Data collection

Data were initially collected in Spring 2024 by the authors, who all have substantial expertise in behavioural design theory, practice and pedagogy, using initial search terms 'behavioural design process' and 'design for behaviour change process'. To increase external validity, our search included both academic and 'grey literature' of process descriptions. Grey literature was identified through targeted web searches, organisational toolkits and practitioner reports, supplemented by snowball sampling based on cross referencing between processes, journal citations and examples from recent systematic reviews (Voorheis *et al.* 2022; Bay Brix Nielsen *et al.* 2024). To test the robustness of our sample, we conducted a second, more general search for behavioural design and implementation processes in Autumn 2024, which confirmed that the processes found to date were adequate for our purposes. For each process, the 'main' descriptive document functioned as a primary reference, which was augmented by other relevant documents or publications to triangulate available information, where possible. Table 1 lists those processes included in the review along with their originating field and primary source.

3.3. Data analysis

Our analysis followed the interpretive, iterative logic of CIS in several stages with a constant comparative method across processes. In the first stage, we familiarised ourselves with each process and any core process artefacts (e.g. diagrams or descriptions of the process). We also discussed the originating field and familiarised ourselves with some of the dominant ways the process had been used. In the next stage, one author read through primary sources in detail and extracted data based on a protocol derived from our conceptual framework (Figure 1). The protocol (see Table 2) helped to support internal validity (by increasing consistency, conceptual focus and systematicity) and construct validity (by ensuring alignment between extant process constructs and our analysis). As such, it sought to offer a descriptive analysis of common features, differences and deficits in our sample by explicitly highlighting key elements of processes including understanding the inputs, stages, actors or organisational context, outputs and wider context. This both provided an account of current leading behavioural design processes and revealed several salient areas of contrast that formed the basis for elaborating further findings. The results from this stage were discussed in regular meetings with ongoing comparison across methods. In a final phase, the entire author team developed and iteratively refined core themes that emerged from the analysis. This included iteratively moving between the coded data, theory and core models from the general design process, behavioural science and product development literatures to deepen our understanding of the themes. Analysis was deemed complete after several iterations when additional processes did not reveal substantively new findings or fall outside the scope of already extant themes. The detailed findings are elaborated in the results section and summarised in Table 3.

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Table 1. Overview of the processes included in the Critical Interpretive Synthesis, indicating their disciplinary origins, representational form and intended application domains

Process	Originating field	Representational form	Intended application domain
Behaviour change wheel (Michie *et al.* 2015	Health psychology	Academic paper	Health, public policy, behaviour change interventions
Behaviour centred design (Aunger & Curtis 2016	Public health	Academic paper	Public health, WASH
Behavioural design process (Cash, Gram Hartlev & Durazo 2017)	Engineering design	Academic paper	Product, service and system design
Eight-step model of persuasive technology (Fogg 2009)	Human–computer interaction, persuasive technology	Academic paper	Digital technologies
Modes of transition (Ozenc, 2014)	Human–computer interaction, Interaction Design	Academic paper	Interactive products
Designing for behaviour change (Wendel 2013	UX design, behavioural economics	Book	Digital products and services
BASIC toolkit (OECD 2019	Behavioural public policy	Toolkit	Public policy and government interventions
Behavioural design teams (Ideas42) (Barrows *et al.* 2018	Behavioural economics	Report	City government and public sector programmes
Dalberg human-centred design and behavioural science integration primer (Dalberg Design 2020	Human-centred design	Toolkit	Development, social innovation, policy
3Bs approach (Irrational Labs 2019	Behavioural economics	Framework	Digital products, behavioural startups
Designing for behaviour change toolkit (Bridgeable 2025)	Service design, behavioural economics	Toolkit	Services and organisational behaviour
Ritual design toolkit (Baxter *et al.* 2020)	Design research, experience design	Toolkit	Experience, interaction and organisational design

3.4. Data characterisation

In total, we identified 12 behavioural design processes spanning the fields of design, behavioural science, policy and human–computer interaction represented through a range of publication formats including journal articles, toolkits and reports.

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Table 2. Protocol used to guide the initial interrogation and coding of identified processes based on our conceptual framework (Figure 1)

Category	Major questions asked of the reviewed documentation
Inputs and selection	How is the problem/solution qualified as a basis for selecting this process?
	What are the selection/entry criteria for the overall process?
	What are the selection criteria for utilisation of supporting design or research methods?
	What are the selection criteria for utilisation of supporting theory/ frameworks/lists etc.?
	What are the norms of practice associated with the overall process?
Stages and practices	What are the goals of process steps are undertaken?
	What is the step procedure and is there within stage, between stage, or process iteration?
	How should the steps be enacted?
	What are external constraints on problem, solution, or process?
Actors and organisational context	Who are the team and how should they be picked?
	What capabilities are needed for steps?
	What capabilities are needed for the overall process?
	What specific knowledge is needed for the overall process?
	Are there any belief frameworks/mindsets required for the overall process?
Outputs and interpretation	How is 'success' or 'quality' of each process step evaluated?
	How is 'success' or 'quality' of each step's design output evaluated?
	How is 'success' or 'quality' of the overall process evaluated?
	How is 'success' or 'quality' of the overall design output evaluated?
Wider context	How is process legitimacy judged in context?
	How are outcome and evidence legitimacy judged in context?
	Are there any other external influences on the process e.g., organisational expectations?
	Are there other stakeholders that should be considered e.g., users, peer reviewers?

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Collectively, the sample includes processes developed within academic research traditions as well as those primarily through practitioner-oriented guidance, which provided a heterogeneous sample. Table 1 provides an overview of the included processes, detailing their disciplinary origins, representational form and the intended application domains. While many of the reviewed processes have been applied across a wide range of contexts and problem types, the application domains listed here reflect how the processes are typically framed in their primary source materials and are intended to be illustrative rather than exhaustive.

4. Results

4.1. Common features and sample relevance

Processes uniformly identified the need for behaviour change as a key motivating input and measurable change as an indicator of output success, which broadly translated into positioning discrete behavioural challenges as the target of intervention development. All processes addressed this focus through stages that included problem definition, literature review, contextual research, method-based ideation, solution development, and testing. These results confirmed the relevance of the sample with respect to both general expectations for evidence-based behavioural design and our specific conceptual framework (Figure 1). Hence, they serve as a basis for further analysis.

4.2. Differences

Interpretive comparison also illuminated two notable contrasts. First, despite 'evidence' forming a major construct across processes, there were significant – although often implicit – differences regarding what qualified as evidence for process initiation, progression and output. For example, design-driven processes typically prioritised contextual, qualitative evidence informed by abductive and inductive reasoning (e.g. Bridgeable 2025) while hypothesis-driven processes prioritised more quantitative evidence based on deductive reasoning (e.g. the 3Bs (Irrational Labs 2019). We interpreted these differences as reflecting deeper epistemological orientations regarding rigour, validity and generalisability as well as the overall approach to the design space (e.g. opening up and questioning default problem/solution framing via abduction versus narrowing and concretising existing framing via deduction).

Second, processes focused on different types of outputs (e.g. a specific interface or intervention versus an intervention that facilitated services within a system). This had implications on both stakeholder involvement and assumptions regarding organisational and operational contexts. For example, while some processes focused primarily on discrete solution development, others considered a longer timeline and development phases that traversed disciplinary modes (such as navigating more open-ended design methods in earlier framing activities, followed by more analytical modes as development progressed) and benefitted from involving different stakeholders and skillsets (e.g. BASIC's (OECD 2019 suggestion to include the impacted publics when crafting behavioural public policy). However, these stakeholders and contexts were often only implicitly defined within individual instances and were revealed more through contrast across processes. Further,

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semantic differences between process components tended to alternatively exacerbate and obfuscate areas of difference and ambiguity.

4.3. Deficits

Our interpretive synthesis focused not only on what was explicit in process descriptions but also what was *not* written, ambiguous or left implicit, which also shapes how behavioural design is conceptualised and practiced. These deficits were identified in both methodological and conceptual areas. In the former instance, for example, processes typically did not provide guidance on how to gauge readiness to move from one stage to the next or about when and to what degree iteration should happen, whereas in the latter, issues of team composition and associated philosophical practices typically remained implicit. For example, differences between abductive design sensibilities (that is opportunity identification) and inductive/deductive, analytical ones (i.e. targeted problem-solving) could only be identified by contrasting assumptions in processes such as the BCW (Michie *et al.* 2015) and Cash *et al.* (2017). While processes are, by definition, reductive reflections of problem-solving activities that deliberately remove nuance in the interest of systematic replicability, this lack of explicitness also diminishes opportunities to surface key questions – How do we know we are ready to move on? Who should be included in these deliberations? Why is this the best path forward? – that can materially impact outputs and which may present a particular challenge to more novice practitioners who are more likely to rely on published processes. These findings, summarised in Table 3, serve to answer RQ 1 and emphasise the need for deeper theoretical analysis to understand what is and is not needed in behavioural design processes.

Table 3. Initial descriptive analysis of information included in sampled processes

Category	Key findings from the protocol coding
Inputs and selection	• All processes report targeted behavioural change as the main criterion for process selection, with an implicit framing as 'tame' problem solving (e.g. focusing on definable challenges (Michie *et al.* 2015; Aunger & Curtis 2016). • Processes vary in criteria for process selection and adaptation (i.e. how the process would be identified as relevant to the situation at hand and the degree to which it can be adapted to different situations), beyond framing as a 'behavioural problem' or specific product types (e.g. 'digital tech' (Wendel 2013). • Processes vary in the extent to which they explain how they should be combined with other design methods and/or theoretical frameworks, with underlying rationale for inclusion often being implicit.
Stages and practices	• Most processes report linear and deductive stage organisation, with clear and constrained goals. • Iteration is reported with instances of whole process (e.g. BCW (Michie *et al.* 2015 or BCD (Aunger & Curtis 2016) and stage level iteration (e.g. Cash *et al.* 2017) and Fogg (2009), but iteration criteria are typical implicit with no explicit go/no-go criteria. • Practices and staging vary in both execution and nomenclature, and are often example based, with no specific practice frameworks evident.

Continued

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Table 3. Continued

Category	Key findings from the protocol coding
Actors and organisational context	• Team roles, management or capabilities are typically described as general titles (e.g., 'intervention developers' (Michie *et al.* 2015, 'program designers' (Aunger & Curtis 2016, or 'UX teams' (Wendel 2013). • Default skills largely prioritise behavioural science and generally differentiate scientific, creative and decision-making skills. • Knowledge and beliefs needed to run the process are typically implicitly aligned with the fields of practice from which the process originates (e.g. design in Cash *et al.* 2017) or agile in Wendel (2013).
Outputs and interpretation	• Outputs at stage level are typically illustrated with examples and/or associated with explicit criteria, although different processes emphasise scientific concerns versus design concerns. • There is a general focus on transparency, explainability, efficacy and effectiveness of outputs (e.g. Michie *et al.* 2015) and (OECD 2019). However, there is ambiguity in the differentiation of efficacy and effect across processes. • While most processes reflect on process 'completeness', this is not consistent across processes, and there are few explicit stopping rules or go/no-go criteria (e.g. scientific best practices for quality (Michie *et al.* 2015 or design issues of feasibility and utility (Wendel 2013). • A few processes (e.g. BASIC) refer to or support stages for longer-term maintenance or refinement to ensure continued or sustainable success, instead of primarily ending with implementation and measurable short-term outputs.
Wider context	• Process and outcome legitimacy are generally linked to scientific characteristics and values (theory/testability/explicability) with design/management/ stakeholder considerations (user involvement/feasibility/value) acknowledged across the sample but not consistently within individual processes. • External influences and stakeholders are typically framed as *either* scientific (where organisational issues, management or user involvement are implicit, for example, BASIC (OECD 2019; ideas42 (Barrows *et al.* 2018), design (where organisation and management are acknowledged (Wendel 2013; Cash *et al.* 2017) or human-centred (where stakeholder engagement is central (Dalberg Design 2020). However, no process addresses all three aspects and the associated decision-making trade-offs.

5. Thematic analysis, discussion and propositional framework

The range of implicit assumptions indicated throughout the descriptive results (Table 3) make sense in the context of an emerging field, where there are few alternative processes and practices tend to naturally align with the fields from which processes emerged (e.g. behavioural science, design). However, the level of inference required limits current applicability, comparability and cross-process

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learning and threatens to inhibit disciplinary maturation and the development of practice expertise. Deeper analysis to explain these commonalities and differences across behavioural design processes is therefore warranted.

To address this, and RQ 2, we constructed two fundamental themes related to the underlying mechanisms of behavioural design processes and three applied themes dealing with their implications. Together, these themes support our propositional conceptualisation of behavioural design processes as adaptive responses to behavioural prompts within a broader, dynamic process ecosystem shaped by the interplay of uncertainty, contextual specificity and evolving practices that benefit from reflective judgement, iterative progression and diverse capabilities. This reframing challenges dominant assumptions about standardised process models and offers an alternative logic grounded in responsiveness and situated action, and is elaborated in the discussion of these themes below.

5.1. Dynamic and uncertain behavioural design processes

Our first fundamental theme considers the need to position processes with respect to their ability to navigate degrees of dynamism and uncertainty in their inputs, context and outputs. The ways in which processes identified and responded to *dynamics* proved a critical, yet inconsistently applied, basis for differentiation. For example, Fogg (2009) situates the identification and gradual growth of intervention 'success' dynamically across stages of refinement. In contrast, Wendel (2013) addresses process-scale dynamics, where the outputs (and their impact on context) from one iteration form the basis for the next, whereas Michie *et al.* (2015) acknowledge meta-process dynamics by positioning their process as part of wider complex intervention development. Despite this variation, the processes in our sample also tend to selectively 'freeze' their understanding of input/start, context and output/end points, as evidenced by calls to identify discrete behavioural challenges that result in measurable interventions at a single, static point in time.

However, viewing these variances within the wider process literature highlights a more fundamental relationship between process formulation and dynamics. For example, an iterative process of continuous alignment and realignment benefits situations in which both problem and solution are dynamic (Ulrich & Eppinger 2015, whereas a more linear process may be preferable if the problem is essentially static and only the solution is dynamic (Lévárdy & Browning 2009; Ulrich & Eppinger 2015). Further, Chambers, Glasgow & Stange (2013), Movsisyan *et al.* (2019), and Schmidt (2022) extend dynamic influences to recognise changes in context or in the relationship between problems, solutions, context and process. This also corresponds to the recent work of Bay Brix Neilsen et al. (2024), and others in the systems context (de Weck *et al.* 2011; Maier & Cash 2022), who highlight how all of the elements of our conceptual framework (Figure 1) can display dynamic properties at different levels of abstraction. This recognition that some system components display repeating patterns over time while others might not, or that some aspects of behaviour might be more (or less) stable in comparison to other behaviours, other aspects of technological interventions or the wider context adds significant complexity to design processes. This heightens the importance of understanding the role of dynamics in any given context; for example, when dealing with isolatable, testable products versus continuously adapting services and systems (Ulrich & Eppinger 2015. It also strongly suggests the need to incorporate

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expectations for final outputs into the iterative formulation of behavioural design processes. This is reinforced by our findings that even the same basic processes (e.g. BCD (Aunger & Curtis 2016) or BASIC (OECD 2019) are capable of generating a wide range outputs (from products to systems), the selection of which can significantly influence how those processes are enacted. This is acknowledged to a degree by Wendel (2013) who suggests that their process can be 'layered' onto other design processes. Hence, we suggest:

- Positioning behavioural design processes as part of and in relation to a wider dynamic context, where processes' 'start' and 'end' points in time are semi-arbitrary.

Allowing for dynamics in inputs, context and outputs also requires acknowledging the influence of *uncertainty*. While no processes in our sample explicitly name 'uncertainty', its influence is often evident in their formulation. For example, some processes include an iterative approach to account for the 'difficulty in predicting outcomes' (e.g., Fogg 2009) while others build on scientific theory to 'increase confidence' (certainty) in the basic understanding of a problem or solution (e.g., Michie *et al.* 2015 and Aunger & Curtis 2016). More generally, processes attempted to reduce uncertainty by minimising scope and complexity, such as directions to 'get uncomfortably specific' (3Bs (Irrational Labs 2019) or to 'select the smallest, simplest behavior that matters' (Fogg 2009). This broadly aligns with problem-solving approaches – both within and outside of behavioural design – that define problems with upfront specificity such that uncertainty in the solution can be monotonically reduced as the process progresses (e.g. see Browning *et al.* 2002).

In the wider literature, uncertainty has been defined as the 'the lack of complete certainty—i.e., the existence of more than one possibility. The true outcome/state/result/value is not known' (Hubbard 2009, p. 80) and more specifically for the process context as the 'potential deficiency in any phase or activity of the process which can be characterised as not definite, not known or not reliable' (Kreye *et al.* 2012, p. 683). In this light, many aspects of behavioural design – including, but not limited to, the input problem, context, outputs, and subsequent outcomes – are not fully knowable or stable, and therefore uncertain. Various authors have recognised that to be effective, processes need to respond effectively to the uncertainties that they face (O'Connor & Rice 2013; Ramasesh & Browning 2014); depending on the level of uncertainty, processes might accept and work with it during development (Brown 2008; Highsmith 2009) or attempt to mitigate it upfront (Lévárdy & Browning 2009). Further, uncertainty regarding process, outputs or longer-term outcomes (De Meyer, Loch & Pich 2002; Ramasesh & Browning 2014) all have differing implications for process formulation and progression. More critically, De Meyer *et al.* (2002) and others (e.g. Highsmith 2009) highlight how minimising uncertainty too early at one level can be problematic when uncertainty remains at other, higher levels (e.g. detailing a process plan before an output is defined or detailing outputs before wider outcomes are understood). This makes understanding uncertainty and its change over time central to understanding how best to act and proceed. Indeed, differences in uncertainty and other aspects of complex design may usefully be understood and modelled in a variety of ways (Fernandes *et al.* 2017). Hence, we suggest:

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- Selecting and adapting behavioural design processes in relation to the uncertainties they face, including the various, dynamically changing uncertainties in their inputs, outputs, and context over time.

5.2. Context sensitivity and a process ecosystem

Our second fundamental theme was the relationship between how processes are defined (by their authors) and selected/adapted/implemented (by their users) in relation to assumptions about context dynamics and uncertainties described above. Contextual issues, such as local conditions (Damschroder *et al.* 2022, 2009), political and geographic factors (Pfadenhauer *et al.* 2017) are well acknowledged in the implementation (May, Johnson & Finch 2016) and design (Burleson *et al.* 2024, 2023) literatures. However, they are typically treated as factors to consider in the design of specific interventions, rather than as a basis for defining, selecting or adapting processes used to develop those interventions.

In our sample, processes tended to be formulated around general types of outputs (e.g. persuasive technologies (Fogg 2009; Wendel 2013) or application areas (e.g. public policy (OECD 2019) that essentially served as implicit proxies for their presumed solution space. However, this implicit alignment may oversimplify the extent to which the dynamism and uncertainty of various process elements may hinder efforts to systematically generalise processes across contexts. For example, process elements predicated on links between theory and embodiment (e.g. Stage 3 in the BCW (Michie *et al.* 2015) might be stable for some long-established technologies (e.g. poster design) but more dynamic for evolving or emerging technologies (e.g. phone interfaces or the introduction of GPTs (Generative Pre-trained Transformer) and LLMs (Large Language Model)). Such effects can also manifest at multiple levels of abstraction. For example, while a service system might change over time, requiring responsive, longitudinal processes, interactions with specific parts of the system might remain stable, requiring focused processes (Ulrich & Eppinger 2015. Further, processes themselves may splinter or converge, reflecting responses to dynamic variations in uncertainty. For example, 'design thinking' processes are often used in the highly uncertain 'fuzzy-front end' of problem framing to ensure that the more linear development processes that follow are solving the right problem (Zhang & Doll 2001). These issues are hinted at in our sample via discussion of interactions with other processes, such as wider intervention development (Michie *et al.* 2015 or product/service development (Wendel 2013; Cash *et al.* 2017), but these relationships are not consistently explained nor explicitly theorised.

Hence, we propose that behavioural design processes can be conceptualised as part of a *process ecosystem*, where various processes and their component parts are formulated, iterated upon and combined in relation to dynamic uncertainties and contexts, and at different levels of abstraction, over time. This may seem to conflict with the fact that most of our sample echo many traditional, linear development processes in their tendencies to define problems upfront, employ limited iteration and deliver specific interventions (Table 3) (Browning *et al.* 2002; Ulrich & Eppinger 2015. However, unlike the development literature, where interactions with other process types are well acknowledged (e.g. linking development in sequence or parallel to design thinking, service design or systems design processes (Ulrich & Eppinger 2015), evidence of such process linkages are scarce in our

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behavioural design sample, as noted above. This increases the likelihood of solving problems that do not need solving or creating outputs that are difficult to integrate or implement in context (Zhang & Doll 2001; De Meyer *et al.* 2002). For example, a lack of front-end exploratory processes may result in working on symptomatic rather than root cause problems, constrained process capabilities can lead to jumping to assumed solution formats (like apps or user interfaces) over more effective alternatives, and a failure to integrate detailed design and implementation processes can contribute to solutions that are more aligned to the requirements of experimental trials than to the realities of deployment. Efforts to mitigate these forms of procedural 'brittleness' – which align with broader accounts of behavioural design solving problems in isolation while neglecting or underappreciating systemic or implementation issues (Hagger & Weed 2019; Schmidt and Stenger, 2021; Voorheis *et al.* 2022) – also promise to help resolve wider perceived tensions between design-led or behavioural science-led processes (Schmidt 2020; Bay Brix Nielsen, Daalhuizen & Cash 2021; Voorheis *et al.* 2022), where each can respond to different dynamic and uncertainty properties in a case of 'which/when' rather than 'either/or'. Hence, we suggest:

- Positioning behavioural design processes as part of a context sensitive ecosystem, where processes can be positioned relative to one another as well as in combination with other process types.

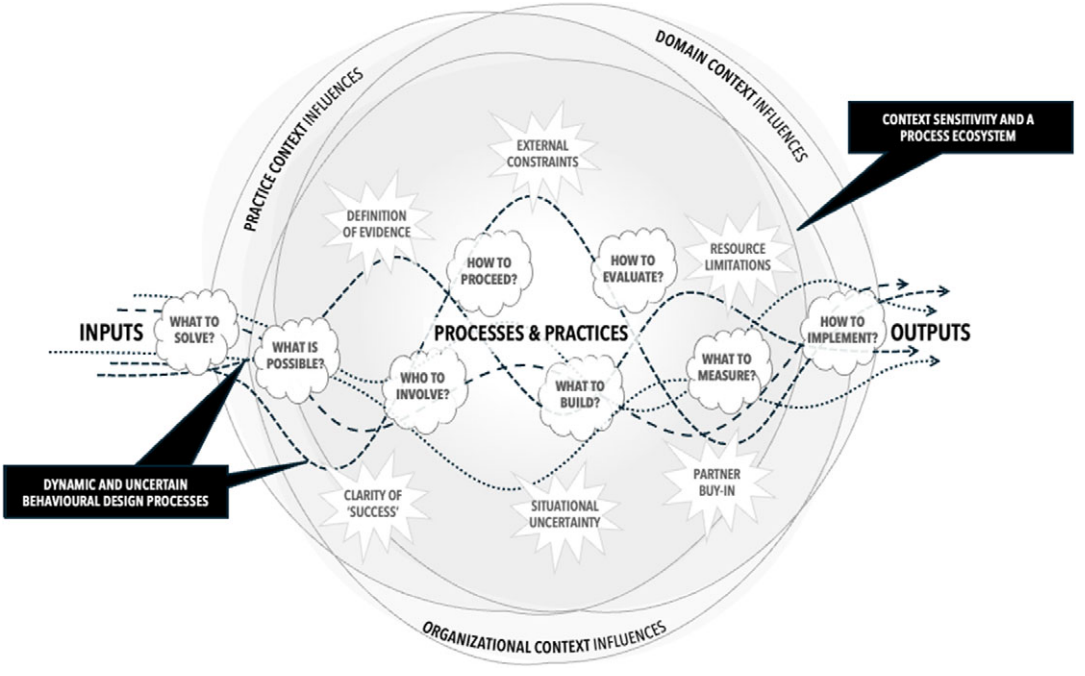


Figure 2. Revised conceptual framework, depicting the variability of inputs and paths through behavioural design processes and how these take place within an ecosystem composed of organisational, domain and practice context influences, resulting in increased process dynamism and uncertainty.

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These two fundamental themes are reflected in our revised conceptualisation, depicted in Figure 2.

Together, these suggestions point to the value of situating behavioural design processes both within a dynamic uncertain context and in relation to other processes: in other words, as a dynamic ecosystem rather than a sequence of activities. Seeing behavioural design processes as specific, but malleable, responses to context dynamics and uncertainties therefore not only conveys the potential for a shared sensibility amongst the behavioural design processes in our sample but also starts to align our understanding of these processes with wider theories of process definition and progression. Hence, acknowledging the importance of dynamics, uncertainty, context, and ecosystems forms a fundamental answer to RQ 2 as well as a basis for developing our applied themes: incorporating iteration and transition, the role of practices and capabilities, and immediate and proximal outcomes.

5.3. Incorporating iteration and transition

Building on our two fundamental themes (and as illustrated in Figure 2), we developed a first applied theme: the role of iteration and transition as mediators of process progression. When behavioural design processes are viewed merely as a sequence of stages without clarity on when to start, stop, repeat, or change them – let alone whether the process itself is valid for a given task – it risks reducing them to rote formula. Addressing dimensions of dynamism in a process ecosystem only heightens the need for reflection, deliberation and an iterative sensibility.

In our sample, iteration and transitions were clearly recognised but only implicitly addressed, suggesting that its application may rely unnecessarily heavily on tacit knowledge and practice-based experience rather than explicit guidance. Despite a general tendency toward linearity (Table 3), most processes also reflected iteration to some degree, which ranged from substantial and explicit (e.g. Fogg suggests to 'start small and iterate quickly' (2009, p. 6) and Aunger & Curtis (2016) incorporate iteration in their build and create stages) to largely implicit (e.g. OECD (2019) or Dalberg Design (2020), which position their processes as part of a wider general iterative development). However, criteria for when steps should be ended, iterated or progressed were not explicit, if described at all, and few processes in our sample identified specific process control gates or activities (Table 3). As a result, the practice and value of iteration is not particularly well defined in behavioural design processes, which often implicitly positioned processes more as a series of procedural, step-to-step activities that employ reflection and choice within the context of discrete procedural stages, rather than in the interest of continual refinement. It also limits behavioural designers' opportunities for reflection on whether new insights have altered the nature of the challenge or process itself. This contrasts with the wider process literature, where the need to understand and respond to shifts as projects progress has long been acknowledged (Dorst & Cross 2001; Lewrick, Link & Leifer 2018) and forms the basis for effective reflection-in and reflection-on action (Schön 2017) that can inform both the immediate challenge at hand and future work. Further, Marks, Mathieu & Zaccaro (2001) explicitly differentiate task-focused activities (e.g. Michie *et al.*'s (2015) steps or Cooper's (2008) stages) and reflective, direction-focused transitions (e.g. Cash *et al.*'s (2017) or Cooper's (2008) gates).

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Hence, we suggest that behavioural design processes can benefit from balancing progression against their central task with productive reflection throughout the process. Doing this effectively requires understanding the relevance of individual activities as well as their alternatives (Lewrick *et al.* 2018). Further, explicit understanding of when and why to iterate, progress or change process provides critical transparency into the work of solution development. Building proficiency demands the ability to thoughtfully select approaches, critically reflect upon them and iterate processes in an ecosystem with a more nuanced and flexible understanding of what it means to 'progress' to a solution. While the appealingly simple approach of 'following steps that usually work' may provide useful support to novice practitioners, this oversimplification can result in formulaic application or false certainty that can undermine practitioners' ability to internalise an accurate sense of progress or cultivate true expertise (Badke-Schaub, Daalhuizen & Roozenburg 2011; Daalhuizen 2014). However, given the increasing interdisciplinarity and applied scope of behavioural design, tacit assumptions and norms of process progression cannot be taken for granted. Hence, explicitly understanding and incorporating iteration and transition will be essential to effectively navigating behavioural design process ecosystems, whilst also fostering expertise development individually and within the field.

5.4. Practices and capabilities

Our second applied theme builds on Figure 2 by acknowledging the expanded scope and complexity of relevant behavioural design practices and capabilities. While our sample emphasises behavioural science skills (Table 3), various processes also hinted at the need for other capabilities, including effective process and team management, decision-making and creativity (e.g., Aunger & Curtis 2016, Cash *et al.* 2017, and Wendel 2013). However, despite the wider literature's recognition of the importance of process management practices and capabilities (Marks *et al.* 2001; Lewrick *et al.* 2018), our sample indicated a lack of clarity on how these might be applied or adapted for behavioural design.

More specifically, the mindsets, practices and capabilities necessary to enact processes were almost uniformly implicit or otherwise went unremarked upon (Table 3). This contrasts with the wider process literature that highlights their importance in effectively interpreting and enacting processes (Daalhuizen *et al.* 2019; Daalhuizen & Cash 2021), whilst also recognising their potential to contribute to cross-disciplinary misunderstanding. In particular, design and behavioural science practices do not always easily combine or lend themselves to clean collaboration (Schmidt 2020; Voorheis *et al.* 2022; Bay Brix Nielsen *et al.* 2024), and Cash and Joo (2026) highlight the need for explicit coordination of behavioural and technological aspects across levels when dealing with complex behavioural design. Hints of such issues were noticeable in processes that suggested specific combinations or orientations for integrating disciplinary practices, such as grafting design onto behavioural design activities (e.g. Bridgeable 2025), centring on a singular discipline as a baseline (e.g. introducing design to behavioural science (Irrational Labs 2019, or introducing behavioural science to design (Dalberg Design 2020) or employing handoffs from one disciplinary domain to another (e.g. OECD 2019). In other cases (e.g. Michie *et al.* 2015; Aunger & Curtis 2016; or Baxter *et al.* 2020), attempts to more fully integrate behavioural science and design

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processes though practitioners' roles and modes of engagement in each task left assumptions implicit or seemed somewhat arbitrary. Beyond this, many sampled processes built on other existing models of behaviour that require their own understanding to be a fully comprehended (e.g. Michie *et al.*'s 2015, Figure 1.4) The COM-B model or Aunger & Curtis's (2016, Figure 2) motivation framework); in addition, these instances are often ambiguous in how essential they actually are to the progression of processes, leaving practitioners to develop their own interpretation of what practices might be relevant at any given point.

Hence, we suggest that behavioural design processes would benefit from more deliberately embracing and reinforcing the interdisciplinary nature of the field by more clearly articulating which practices and capabilities are required throughout the process while also recognising that these capabilities are often not constrained to single disciplinary practices. As noted elsewhere (Jensen, Metz & Albers 2024), this demands more explicitly acknowledging the importance of team composition and the extent to which specific disciplinary practices and capabilities align with specific activities or conditions of dynamics and uncertainty. It also highlights how different disciplinary sensibilities conceptualise what qualifies as legitimate evidence, how much is enough and what to do next. These issues also suggest the importance of building on similar studies within design research to inform future work, such as how shared mental models impact how teams work (Casakin & Badke-Schaub 2017) and the distinction and importance of adopting a design mindset throughout design practice (Lavrsen, Carbon & Daalhuizen 2024).

5.5. Intermediate and proximal outcomes

Our third and final applied theme is the salience of both proximal outputs and outcomes – for example, emergent cognitive, affective and motivational states within a team, such as knowledge building or agreement (Marks *et al.* 2001) – and intermediate ones that represent partial, intangible or even unintended results generated during and after a process (Marks *et al.* 2001). While distinct from formal project objectives or metrics for success, these play an important role in shaping process progression, scaffolding learning and expertise development, fostering wider impact through spin-off projects or ideas and capturing the long-term impact of the specific project output itself.

Most processes in our sample focused on a solution or intervention as a singular, definitive output in which processes concluded at the point of trial, while some – specifically, BCD (Aunger & Curtis 2016, BASIC (OECD 2019, and Ritual Design Toolkit (Baxter *et al.* 2020) –highlighted how explicit output/trials can serve as intermediaries to longer-term outcomes. While some processes in our sample implicitly noted proximal outputs, such as building understanding around possible change techniques (e.g. capability in Michie *et al.*'s 2015, p. 259) technique taxonomy), agreement around necessary practices (e.g. aligning design and behavioural science perspectives on required testing as in Cash *et al.*'s (2017, p. 120) testing stage) or developing knowledge about underlying theory relevant beyond the current project (e.g. as supported by Aunger & Curtis's (2016, Figure 2) motivation framework), none explicitly dealt with or highlighted these outcomes as elements to deliberately cultivate and capture. Given their relevance to both successful project progression and collaborative work, failure to explicitly

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acknowledge proximal and intermediate outcomes and outputs risks hindering expertise development and can disguise the wider value of behavioural design processes. Hence, we suggest that behavioural design processes would benefit from their more explicit articulation.

In the wider process literature, proximal and intermediate outputs and outcomes are viewed as key mechanisms for creating value that goes beyond a single process and instead contributes to the wider ecosystem. For example, risky exploratory process that deal with high levels of uncertainty often form the basis for multiple spin-out process that take advantage of the many problem and solution perspectives typically identified in the initial exploration (Kislov *et al.* 2019). Similarly, learnings from one process not only often form the basis for changed practices or improved performance in other teams and in the wider field, but serve as the implicit rationale for reporting much of the scientific work associated with behavioural design as a basis for meta-analysis and review (Bay Brix Nielsen *et al.* 2024). Further, viewing outputs as 'intermediate' is a key differentiator between individual product versus service or systems perspectives, where priorities shift towards implementation, maintenance, and adaptation in context over time (Ulrich & Eppinger 2015. One way to proactively manage changes to interventions is through the model for adaptation design and impact (MADI) which helps anticipate and evaluate interventions (Kirk *et al.* 2020). Addressing such outputs would explicitly position behavioural design processes as simultaneous mechanisms for action as well as learning (Schmidt & Stenger 2021). Hence, proximal and intermediate outcomes are key to understanding how processes function in relation to both the wider ecosystem and the practices of the people enacting them.

6. Summary and implications

Coupled with our descriptive analysis (Table 3, response to RQ 1), our thematic analysis lays the groundwork for a deeper understanding of behavioural design processes (Figure 3, response to RQ 2). Based on this understanding, we contend that there is no one right way to do behavioural design; rather, we interpret behavioural design processes as contextually situated responses to varying degrees of uncertainty, a range of disciplinary and extra-disciplinary assumptions (notably including underlying theories of behaviour and the scope of relevant outputs) and practical constraints. This suggests the need to conceptualise behavioural design and adjacent processes as an interconnected, non-linear ecosystem with potential to feed and complement one another rather than as isolated efforts. This is illustrated in Figure 3, which depicts a behavioural design process ecosystem that supports iteration and transitions (applied theme 1) coordinating within and between processes and practices (applied theme 2), and scaffolding process, inter-process and field development through proximal and intermediary outputs and outcomes (applied theme 3).

This conceptualisation brings to the fore issues of iteration and transition, dynamic practices and capabilities, and the proximal and intermediate outcomes that link these all together. More pragmatically, however, adopting this model requires behavioural designers to become comfortable with selecting, progressing, iterating and transitioning within and between processes over time and at different levels of abstraction. Given that our themes highlight the need to reframe some

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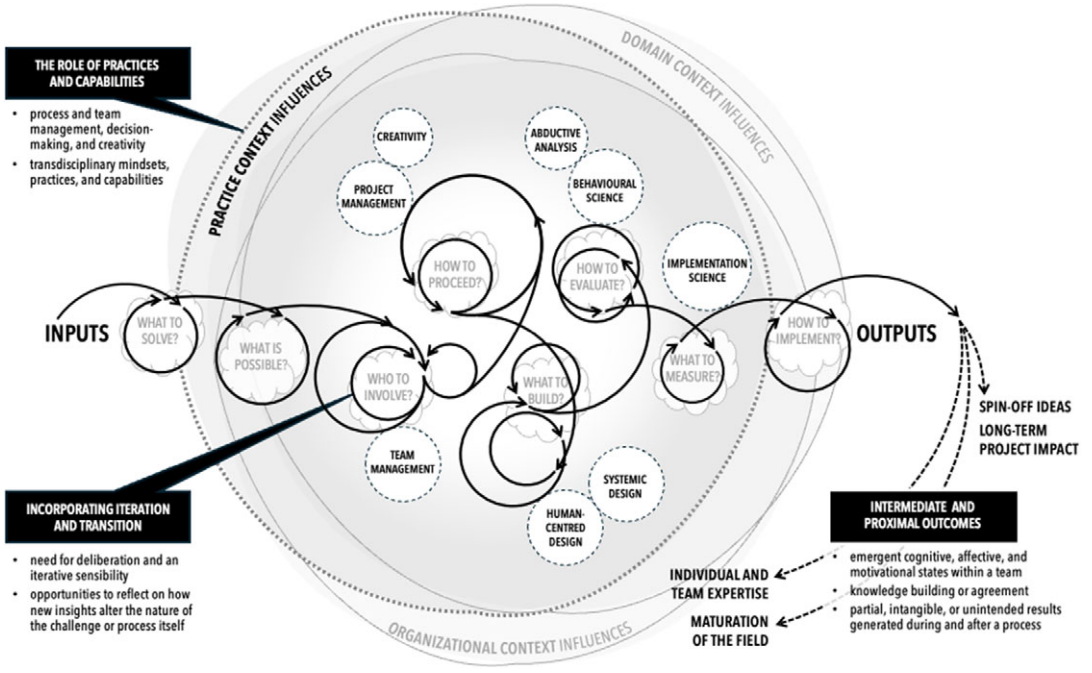


Figure 3. A propositional conceptual model, which positions behavioural design processes as an iterative, dynamic and multidisciplinary effort that results in both project-specific outputs and emergent outputs (e.g. institutional knowledge and individual expertise).

norms of practice (e.g. seeing processes as sequential or skillsets as siloed), addressing these issues may require the discomfort of 'unlearning' of elements of current practice and demand an openness to uncertainty that behavioural design has historically attempted to minimise. While not intended to be read as a practical guide for implementing this conceptual model in applied behavioural design practice, more specific implications of our themes for behavioural design processes are summarised in Table 4.

7. Conclusions

Behavioural design processes are widely used to develop behavioural interventions. Yet despite the growing number and prominence of processes, behavioural designers still struggle to systematically select and employ problem-solving approaches in the face of dynamic and uncertain conditions, hampering their ability to utilise behavioural design to its full potential. Hence, we aimed to answer the research questions: (1) *How are behavioural design processes currently framed, described, and enacted?* and (2) *How can we consistently understand commonalities and differences across behavioural design processes?*

Based on a structured review of 12 widely acknowledged processes, we identified several areas of ambiguity and deficit in current process guidance (Table 3) (answering RQ 1), which then form the basis for deeper thematic analysis. Based on this, we propose a conceptualisation of behavioural design process as contextually

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Table 4. Themes and implications for researchers emerging from the propositional conceptualisation of behavioural design processes illustrated in Figure 3

Theme	Summary	Implications
Dynamic and uncertain processes	Processes are understood, selected, adapted, and progressed based on their relationship with an uncertain and dynamic context. Processes constitute specific responses to dynamics and uncertainties.	• Position behavioural design processes as part of and in relation to a wider dynamic context, where processes' 'start' and 'end' points in time are semi-arbitrary • Select and adapt behavioural design processes in relation to the uncertainties they face, including the various, dynamically changing uncertainties in their inputs, outputs and context over time
Context sensitivity and a process ecosystem	Processes are positioned relative to one another, as well as other process types, in a contextual ecosystem with the potential for series, parallel and co-evolutionary progression. Processes are defined and combined in relation to dynamic uncertainties at different levels of abstraction over time.	• Acknowledge an ecosystem of process types that are contextually more or less relevant and can relate to each other in various ways • Explore how other types of processes might complement existing behavioural design approaches; especially those geared to high levels of dynamics and uncertainty • Develop meta-models allowing behavioural design processes to work through different uncertainty regimes via process combinations
Incorporating iteration and transition	Iteration and transition are essential to understanding how behavioural design processes are directed and/or combined in an ecosystem, as well as key to fostering consistent expertise. Processes should consider how progression in relation to the central task is balanced with reflection on and direction of the process.	• Acknowledge the relationship between iteration and transition and a process ecosystem in a dynamic and uncertain context • Differentiate task-focused activities from reflective, process-focused transitions, which shape process progression and iteration • Make transition and iteration criteria explicit to allow for reflective control (including extending into the wider process ecosystem) and expertise development
Practices and capabilities	Practices and capabilities are essential to understanding how actors interpret and work with behavioural design processes. Processes should clearly articulate the practices and capabilities required throughout, recognising shifting relevance depending on at	• Acknowledge the salience of practices and capabilities in the successful realisation of behavioural design processes • Make practices and capabilities explicit in relation to the various aspects of the process and roles

Continued

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Table 4. Continued

Theme	Summary	Implications
	least activity, context, dynamics, and uncertainty.	within the team, including process management and decision making • Develop an ecology of practices where the relevance of practices can be understood in relation to activity, context, dynamics, uncertainty, and other salient factors
Intermediate and proximal outcomes	Proximal and intermediate outcomes are key to understanding how processes function in relation to both the wider ecosystem and the practices of the people enacting them. Processes act as means of problem solving and learning, connected with other processes over time.	• Acknowledge and characterise relevant intermediary and proximal outcomes emerging from behavioural design processes • Reformulate processes such that they scaffold both output production and expertise/capability development • Reformulate processes success criteria to recognise both efficacy of processes in delivering outputs and contributing to individual and field expertise development

contingent and dynamically evolving components of a broader ecosystem (Figure 3) (answering RQ 2). This conceptualisation then also revealed salient issues in the management of process iteration and transition, practices and capabilities, and intermediary and proximal outcomes. Together, this challenges dominant linear and prescriptive models, instead highlighting the centrality of uncertainty, iteration and reflection in effective behavioural design practice and its resultant implications for those developing or refining behavioural process guidance (Table 4).

While some of these conclusions are more broadly relevant to design process research, they have heightened relevance and value in the behavioural design context. Critically, this is motived by a curiosity regarding how (and how much) behavioural science's more evidence-based and hypothesis-driven processes might adopt and adapt more 'designerly' considerations, such as iteration and an appetite for navigating ambiguity, which are often required in practice. When processes fail to call out these skills and considerations, assuming they will be gained through experience, the risk that these tacit assumptions will remain untapped and latent increases. As such, while fully recognising the difference between process models (which are by nature simplified expressions) and actual practice (which is often forced to grapple with complexity), we suspect that the generative qualities that current behavioural design processes tend to implicitly downplay – albeit to varying degrees – may in fact be particularly valuable as behavioural design strives to address more complex challenges. This paper therefore hopes to both bolster the limited theorisation of behavioural design processes and take an additional step

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toward highlighting how this might also inform shifts in behavioural design practice.

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