

in the digital shadow

An Embodied Debrief

Slava Romanov
Master's thesis

Digital Media M.A.
University of the Arts Bremen

Supervisors: Dennis P. Paul, Ralf Baecker

Bremen, 2026

Abstract

This thesis examines how production traces can reveal the hidden costs of creative labour: coordination, delegation, authorship tension, and overload. Emerging from the performance umbra: In the Digital Shadow, it proposes Embodied Debrief as an artistic research method for returning to a project through its residual material: notes, chats, schedules, self-tracking data, and material remnants.

Bringing together reflective writing, trace-based analysis, and installation design, the thesis develops an analytical model structured around Collect, Allocate, Delegate, and Overload. It reads creative production under conditions of technological abundance and distributed agency as a layered system of accumulation, distribution, externalised agency, and limit. The installation carries this inquiry into space, where these dynamics can be encountered bodily. In this way, the thesis treats process residue as a significant site of knowledge within creative work.

Table of Contents

1. Introduction: Project After the Project.....	4
2. Context: Digital Shadow, Delegation, Overload.....	5
3. Methodological Frame: Embodied Debrief as Artistic Research.....	7
4. From umbra to in the digital shadow.....	9
5. The System as Protagonist / Analytical Model.....	12
6. Operational Modes of Creative Production.....	15
6.1 Collect.....	17
6.2 Allocate.....	20
6.3 Delegate.....	25
6.4 Overload.....	30
7. Installation and Visitor Experience as Rematerialisation.....	37
8. Conclusion.....	44
Repository and Documentation.....	47
Acknowledgements.....	48

1. Introduction: Project After the Project

The performance is over. The final applause had died down. The documentation is complete, and the budget has been accounted for. Materials are returned to their cases and bags, and rest in their proper places. The first impressions, intensely coloured by the feeling that “we finally did it”, begin to fade, and one is left alone with thoughts of how it all unfolded. They are uneasy thoughts, awkward in the shape they take when remembered; they scratch, and they call to mind the ordeals, the points at which things went wrong, the things that could have been done better. Memories of surges of ambition and flashes of despair, translated into the language of professional politeness. How can one rethink and overcome them without having to relive them?

Documentation more readily records the result, or curated excerpts of “work in progress”. For that reason, it often fails to retain coordination labour, forms of delegation, manifestations of overload, and the traces that persist in a person after the project has run its course.

In reflecting on my own production experience, I therefore propose Embodied Debrief as a response to this gap in what can be meaningfully articulated. It is not simply a therapeutic gesture for processing a difficult production experience, nor a dry post-mortem report. It is my attempt to return to the production process through traces, notes, logs, artefacts, and an interactive installation.

In the Digital Shadow can be described as a “project about a project”. It grows out of the multimedia performance umbra: In the Digital Shadow, realised by me and my colleague Chi Him Chik. This examination inherits its chronotope from Bremen, July to December 2025. It also inherits a substantial part of the traces themselves, material, intellectual, and digital, which find their place across the pages of this work, within the exhibition space, in the cloud memory of context windows, within national jurisdictions, and on the solid-state drives of computing devices distributed across the planet.

The rapid development of technological means of intellectual delega-

tion is changing the structure of the creative process: in both labour and communication, the subject is expected to rely on more, while making ever greater demands on both self and others. At the same time, the project environment remains temporally limited and contextually conditioned, while the physical body is still a fragile part of the infrastructure of intellectual delegation. For that reason, an abundance of tools does not automatically lighten the load; it often produces additional expectations of efficiency, acceleration, and permanent availability, multiplying the effects of endless self-optimisation.

This debrief takes shape through reflection, mapping the creative process through a model that constructs the system’s operational logic as that of an agent passing through modes of production, and through the visitor’s interactive experience.

This renewed reading of the creative process through accumulated data seeks to make the hidden costs of production legible: coordination, authorship tension, overload, and recovery, through Collect, Allocate, Delegate, and Overload.

They are summoned again for reflection and deconstruction in order to investigate creative production under conditions of technological abundance, distributed agency, and overload, as seen retrospectively through Embodied Debrief.

2. Context: Digital Shadow, Delegation, Overload

A creative project does not arise in a vacuum; it is personally and socially contextualised. The combination of accumulated experience, knowledge, the seemingly unlimited, the experimental, and the uncontrollable is woven into rigidly defined frameworks of deadlines, format, and dependence on tools and technologies. Deficits of time, stability, and concentration are compensated for by externalised notebooks, digital calendars, FigJam boards, self-tracking, and a wide spectrum of autonomous agents.

Work that’s both visible and liable to slip from attention accumulates like

breadcrumbs. The Digital Shadow is not only a metaphor for accumulated data in a broad sense; it is also the trace of interactions, recorded agreements, assignments, decisions, acts of self-observation, and both support from humans and machines. In this way, one can imagine creating the Digital Shadow of an entire project: it is copyable, reproducible, restructurable, and analysable.

Distributed agency is a normal condition of contemporary production practice. In project-based creative work, action is distributed across bodies, interfaces, teams, contractors, algorithms, and organisational constraints rather than contained within a single authorial subject. Latour's optic is useful here as well: it allows technical systems to be viewed not as a passive setting but as participants in the organisation of action (Latour 1992, 227). Questions of authorship and authority are already present within this distribution.

The rapid growth of AI and the already visible restructuring of familiar production processes make this distributed condition even more tangible. In this project, technological systems participate in decision-making, timing, and the distribution of authorship. Within this distribution, questions of authorship and questions of power are historically entangled.

The drive towards optimisation that characterises the current socio-economic order reaches speeds increasingly beyond the human body's capacity: with the same limited resources, the operator is expected to constantly achieve more. This moral economy of self-coercion, the logic of "you should", is normalised under conditions of an abundance of tools and within the setting of an apparent totality of possibility, the logic of "you can" (Han 2015, 8-9). The burden is not removed; only further expectations of efficiency, acceleration, and constant availability are added.

Under these conditions, I locate the relevance of my work in the fact that a personally lived production experience within an art project at the intersection of human and digital interaction, and one devoted to such interaction, can be revisited in order to discern, within its traces, the hidden price of coordination, authorship tension, and overload.

3. Methodological Frame: Embodied Debrief as Artistic Research

Under conditions of elusive memory, a sense of incompleteness, and the lingering trace of intense psychophysiological experience, there arises a need to come to terms with what has been lived through and to draw constructive conclusions. At the same time, the professional demand for a more "efficient" and "successful" production practice calls for a working-through of mistakes.

What seemed relevant to me here, and worthy of a contemporary media artist's attention, was the double nature of debrief as both desensitising and structuring, together with its blameless approach and its orientation towards the next cycle.

For reflection and for structuring experience, I turn to situated, exploratory, practice-based inquiry, in which insights can be generated by overlaying self-observation, material and digital project traces, and the installation design itself. Haraway's position is important to me here as well: critical reflexivity must be held together with a serious relation to a partially shared world and toward historical contingency (1988, 4-5). For that reason, returning to the process through traces is meaningful only when the traces themselves

are not mistaken for transparent and complete access to it.

The conventional definition of debrief combines retrospective reporting with a recovery-oriented conversation after strain or rupture. In this thesis, debrief is expanded into an artistic mode of returning to the process, in which documented affect, structured data, and installation form work together. Borgdorff helps to specify the status of the installation more precisely: within research in and through the arts, artistic form, process, and the context of presentation can become part of the research itself (Borgdorff 2012, 24-25).

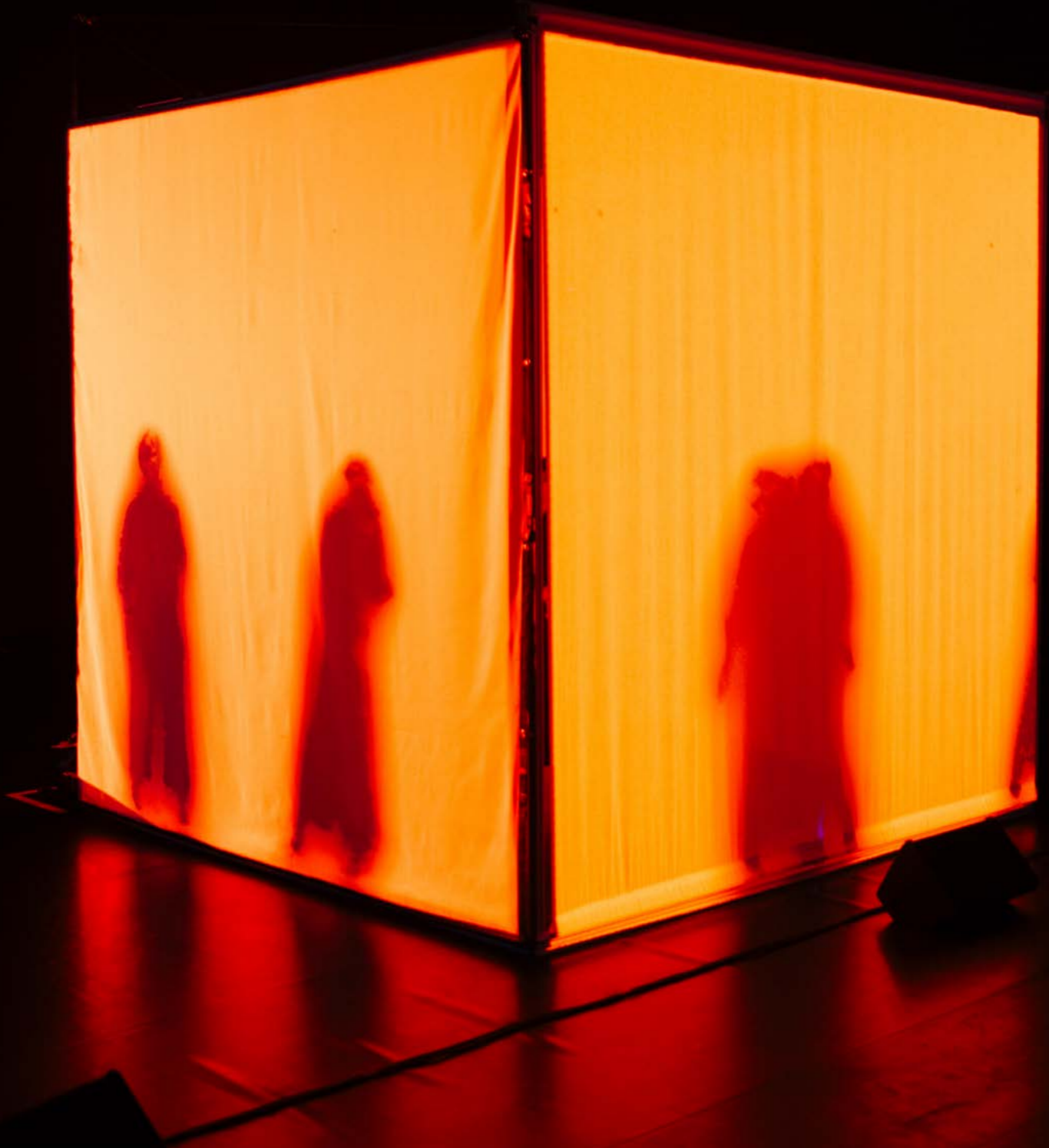
This work approaches production residue as evidence of situated action (Suchman 2007, 45). Locally processed messages in ChatGPT conversations and Telegram chats, a body of usually ignored fitness-tracking exports, scattered diary notes, ambitious schedules, and chaotic paper self-tracking red marks are treated here as materials through which the process can be reconstructed in its lived complexity. Lupton is especially resonant here, writing of self-tracking as a practice of remembering, pattern recognition, and meaning-making through one's own records (2016, 8). It is in that capacity that these measurements matter to the thesis: they preserve one of the embodied registers of the process without substituting for the experience itself.

Quantification and measurement function here as a speculative means of approaching my own data, states, and experiences anew. They serve as instruments of mapping and observation that may intensify the possibilities of reflection, even if they do not yield unambiguous statistically significant conclusions. Lupton draws an important distinction between self-tracking and those cases in which data about a person are gathered without that person's access to them, as "tracking of the self by others" (2016, 8-9). In that sense, turning to sleep, HR, and self-tracking traces can be understood as an attempt to restore contact with the embodied layer that is usually recorded almost imperceptibly and then dispersed across storage systems controlled by others.

The embodiment of lived experience in the form of an interactive installation is also part of the method proposed here. Artistic form continues the research in space, where traces, process residue, and distributed agency become legible once again.

4. From umbra to in the digital shadow

umbra: In the Digital Shadow is an audiovisual performance about the Digital Shadow. It addresses the relationship between technology and the human, shadow and agency, and the question of authorship of gesture and authenticity. It develops this conflict through the possibility of joint improvisation between a human performer and a digital double embodied in a machine. The system records bodily movement, samples it, interprets it, and responds with sonic and visual images.



[Figure 1: illuminated cube in umbra: In the Digital Shadow, Schwankhalle Bremen, 5-6 December 2025]

The idea emerged in 2024, while the work itself took place during the second half of 2025. The performance was staged on 5 and 6 December 2025 at Schwankhalle Bremen, which supported the project through a production residency. The Senator for Culture of Bremen provided financial support, giving the production a distinct budgetary layer. We realised the project in co-authorship with media artist Chi Him Chik, together with a team that supported us in building the motorised kinetic screen, communication, and design.

Naturally, the final fifty-minute time-based form, performed twice at 8 p.m., was only the tip of the iceberg. It was accompanied by announcements in online media, social media posts, photo and video documentation, and a workshop devoted to shared access to the technologies used in the performance.

The reverse side, and the focus of this thesis, is not the outcome but the process residue: what remains after an intensive realisation, what is often pushed out of memory or left to settle into dusty storage as a material burden. I assume that the components of the process can be valuable in themselves. They contain a suspended dramaturgy that can be reactivated through interpretation.

I approach reuse as a methodological act. The retained aura of previously used elements, materials, algorithms, interactivity, even feelings and self-overload generated by expectation, consists of artefacts formed by time and platforms, yet still able to return to the stage in order to produce an inside-out experience of the system.

My medium is what remains.

Across six months of intensive work, a performative project was created that brought together:

- musical composition and sound design
- visual aesthetics
- dramaturgy and choreography
- hardware
- a control system
- team and project management

This was not my first collaborative project, but it was my first theatrical performance. We built a kinetic motorised cube, and I learned how to sew projection fabric. Throughout the process, I found myself delegating work to people and machines more than ever before, with mixed success.

The aluminium profiles used in umbra, the sewn projection fabric, the cabling, the cameras, the sketches, and the code driving the point clouds all enter the space of interaction.

This open-ended methodological experiment uses traced material and embodied skill for situated reading and pattern detection. It allows a shift from documenting the performance to investigating through remnants: the project begins to look back at itself using its own traces.

Because the modes of production are nonlinear and overlapping, I try to mix experience and objects, allowing the visitor to become part of this agency.

5. The System as Protagonist / Analytical Model

I want to introduce the model of the system as protagonist: an analytical approach to assembling the fragmented history of production into a set of entities and relations. The same logic then carries over into the installation, where the system takes on spatial form.

“Shadows” are presented here as units of trace: that which remains after action and can be collected, allocated, returned to the field of attention, and drawn into further processing. They carry residues of embodied, cognitive,

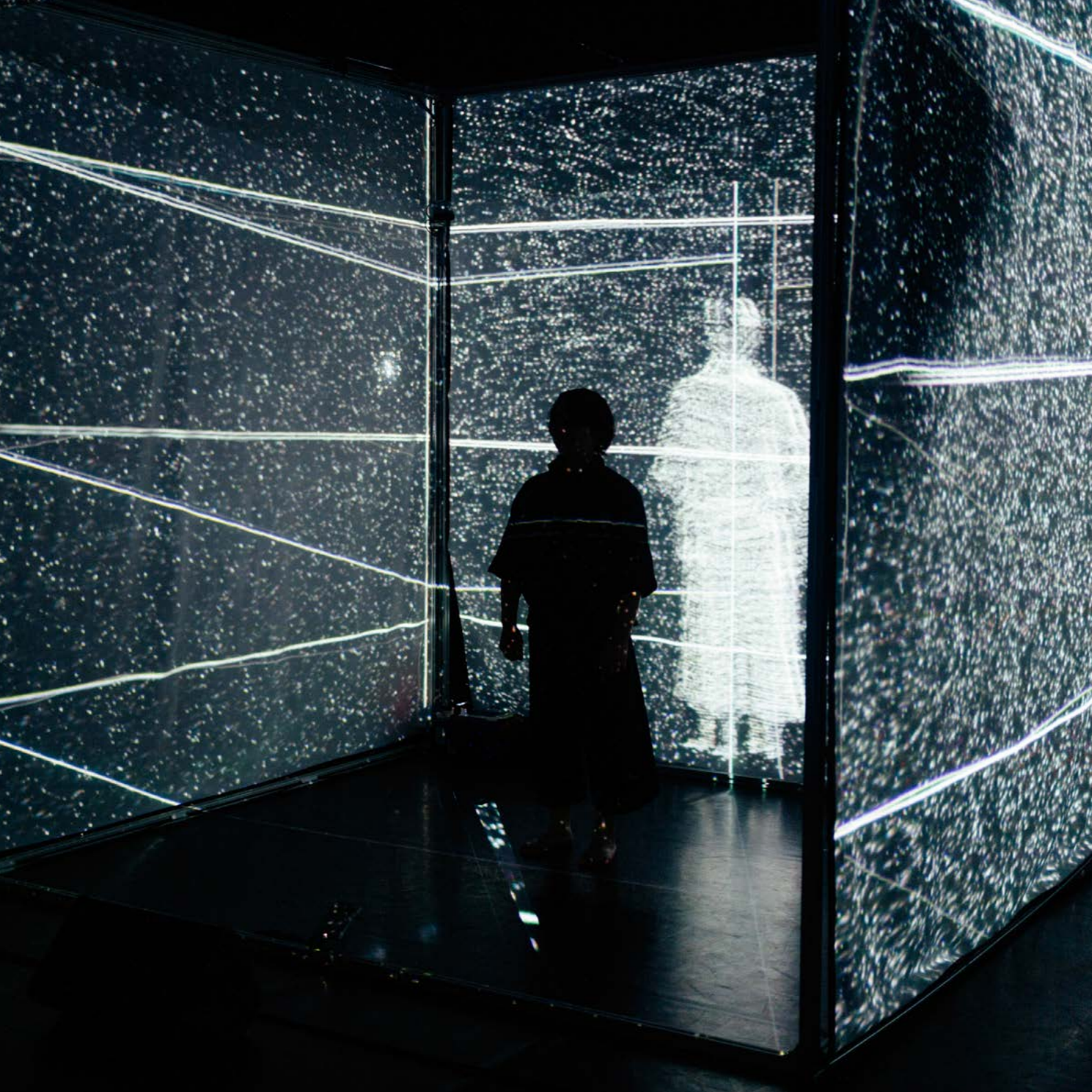
organisational, and digital activity, from notes and tasks to biometric data, logistical events, and chat communication. In this sense, the shadow is a materialised residue of activity, something that translates process into a form available to memory, interpretation, and reworking.

In this model, the archive is both a mechanism of connectedness and a mechanism of limitation. It retains traces, makes their return possible, and, at the same time, sets limits on access, volume, and the duration of storage. In this sense, the archive coincides with memory delegated to a material carrier: paper, silicon, or any substrate on which a trace can be left and later revisited. In the installation, it is the recorded shadows that fill the available memory slots: they are stored, deleted upon request, or disappear once their retention period expires.

A slot is an operational abstraction through which this thesis describes the limitation of how many fragments can be held in attention at once. Within the framework of the project, a slot may refer to time, attention, processing and display capacity, a calendar window for coordination, or a contextual system window. Behind this form lies the idea that limitation can be grasped as a set of discrete positions that can be distributed and filled. The slot is therefore bound up with scheduling, broadcasting, and computation; it already contains the discipline of time, the programming of flow, and the logic of distribution.

Policies and the orchestrator introduce a layer of decision-making within the system. They determine what will be retained, what will be prioritised, how traces move from one state to another, and which incoming signals may be accepted for processing. The system stores, distributes, assigns, and activates units of the archive. For that reason, whatever enters the archive is already subject to a regime of selection: what may count, what may return, and under which conditions it will later be interpreted, following the logic that Derrida links to “commencement and the commandment” (1996, 6). In the installation, these policies are technically fixed, but describing them still requires interpretation, since they emerge through the system’s behaviour rather than appearing as a final, explicit set of rules.

[Figure 2: Performer within the projected system of umbra: In the Digital Shadow]



6. Operational Modes of Creative Production

As it operates, the model moves through different modes. It performs operations by collecting and exchanging gestures and movements, objects from the material world, and data. Within the framework of my reflective and experimental work, I distinguish four modes, each considered through its traces, operational traits, and interrelations. These are Collect, Allocate, Delegate, and Overload. The modes unfold nonlinearly; they often overlap and appear to follow distinct temporal dynamics. There are four operational lenses through which the project can be read.

Because the project does not exist apart from time and the movement of the body, I also introduce threshold states. They describe states of readiness and drift out of which the project's operational logic emerges. They also provide the stage for the events that occur in the installation.

Empty registers the moment in which no accessible thought-assembly is available, response is dulled, and an initial state returns as part of the cycle: a temporary inward closure that matters as a boundary between capacity and incapacity. It resembles the moment of waking, when one cannot yet retrieve a thought and incoming stimuli are hard to answer. A similar emptiness is felt after a breakdown: slightly clouded consciousness, tinnitus, stiffened hands, withdrawal into the self, prickling waves of scattered associations that remain inexpressible and invisible. At such a moment, the inner seems to outweigh the outer. Gradually, however, readiness and the ability to respond return, the world regains a perceptible shape, and the interrelations of surrounding processes become legible again.

Consciousness then shifts into Wandering, a state of drifting thought. When there is no external irritant, no object of capture or collection, the internal orchestrator turns towards accumulated memories. Traces of past gestures, bodies, and expressions replay in perception, at times becoming denser, at times more diffuse. It is like gazing absent-mindedly out a window during a business meeting. The moment someone calls our name, enters the zone of interest, or assigns a task, we respond and enter the process. Yet the wandering of images still leaves traces behind, making the field of concen-

tration vibrate and occupying space within attention. This is the background labour of the attentional field: memories, residual impulses, half-formed associations that have not yet become tasks but already shape selection.

6.1 Collect

Then something appears within the field of attention: a reference, a method, a successful idea, a feature, a gesture, a question, an operation, a possible purchase, a mistake, or a future task. It has not yet become a result, but it has already emerged from the background and demands to be fixed before it disappears. At that moment, whoever or whatever holds agency in the relation, whether a person, an interface, a system of habits, or the logic of the project, determines it to be worthy of capture. This is where Collect begins.

Collect is the active pulling of material into the orbit of the project. Almost immediately, what is captured becomes a potential object of further processing. This does not concern only artistic references or major technical decisions. Far smaller things enter the system as well: a note on a scrap of paper, a card in FigJam, an unvoiced idea, a link, a malfunction, a piece of code, the purchase of a cable, a logistical remark, a quotation, a movement, a facial expression, a bodily trace, tracker data, or a message in a chat. All of this may be gathered more or less systematically, stored somewhere, rearranged, duplicated, and later returned to in another context.

In the umbra project, we spoke about the metaphor of the “ideal room” as part of an extractivist infrastructure that, through interfaces, becomes a space of capturing the body located within it. Within this thesis, Collect links not only the body and recording but a wider set of physical and digital residues: from FigJam and code to metal profiles, screens, cables, and captured traces of bodies. In the installation, capture is the moment when presence becomes data, and the system produces a shadow as a new artefact of memory. Yet the collection continues outside the installation as well: the project continually draws in new parts from which its internal logic will later be assembled.

The dynamics of collecting contain both pragmatism and greed. The

project feeds on what it notices and retains. Here one can easily sense the power of the archive: its hunger, its ambition, “a compulsive, repetitive, and nostalgic desire” (Derrida 1996, 91), its constant readiness to turn almost any signal into a trace, and almost any trace into a potential resource.

Capture here is connected not only with orderly collection but with the desire not to miss, not to lose, not to allow to fall apart what has once entered the field of attention. Every new link, trace, or fragment enters the project under the sign of possible usefulness and thereby pushes it towards further capture. At this point, collecting is experienced not only as careful retention but also as pressure to continue: one more link, one more trace, one more fragment that it still seems too early to let go.

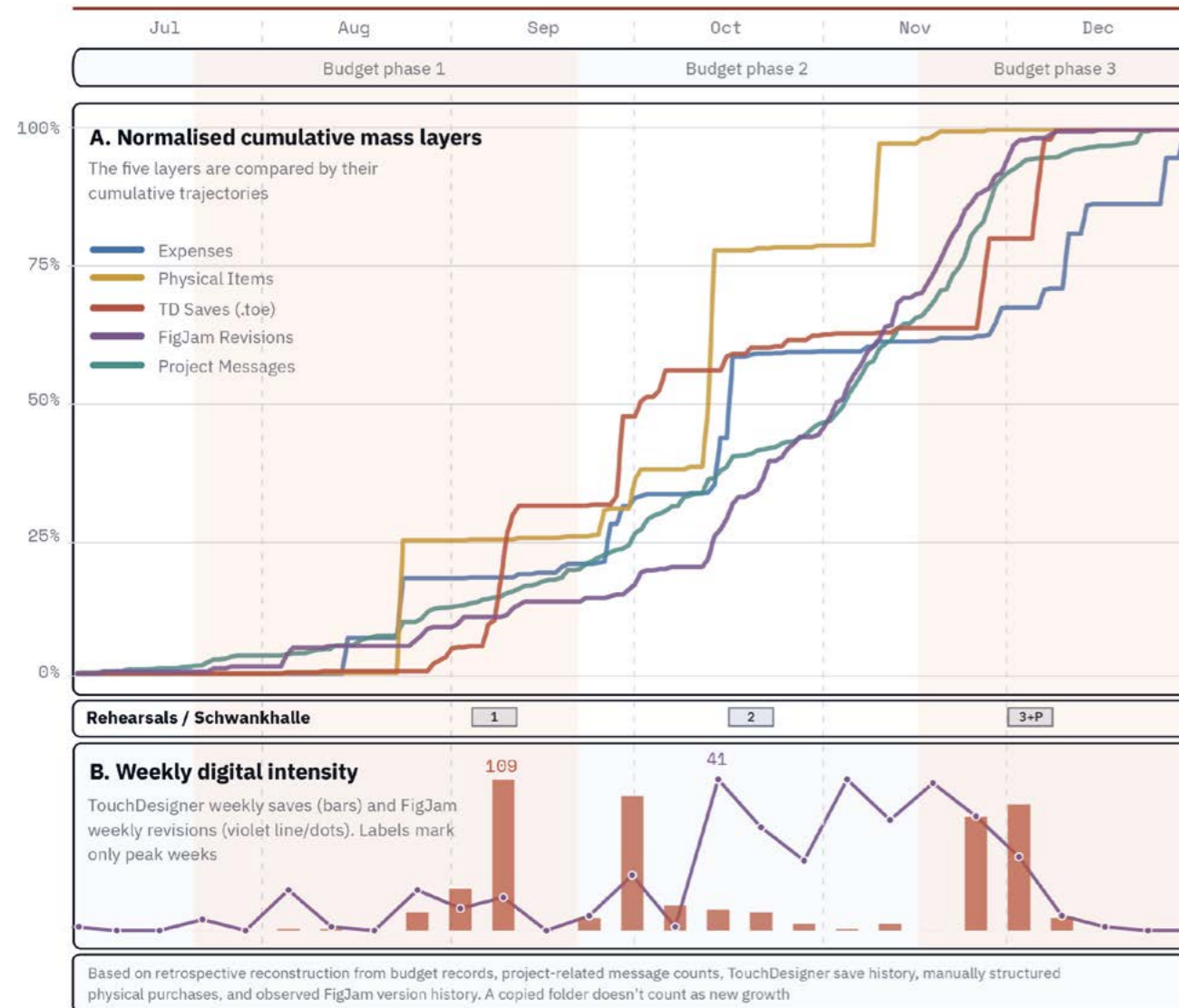
But Collect has a price. Every new reference, component, sketch, contact, or saved item increases not only the project’s possibilities but also its mass, its logistical, cognitive, and affective weight. What has once been captured will later demand attention, time, space, decision, priority, or reworking. The archive does not remain a neutral storage reserve. It begins to exert pressure simply by existing. For that reason, collection matters here more than just the beginning of production; it also marks the beginning of future burden.

If, following Derrida, one accepts that archivisation produces as much as it records the event (1996, 21), this process can be read not through individual artefacts but through accumulation over time. It then becomes visible that the project gradually acquires mass across several registers at once: financial, communicative, digital, material, and the shared-documentation layer. This is precisely what the figure Project Mass shows. In the upper panel, different layers of accumulation are brought to a common scale in order to reveal their shape rather than their absolute magnitude. The lower panels return what such normalisation conceals: bursts of digital growth, clusters of saves, moments when the project abruptly gains density. In this form, project mass ceases to be an abstract metaphor and becomes a legible composition of traces.

[Figure 3: Project Mass. Accumulated project load across financial, communicative, digital, material, and shared-documentation layers. The upper panel compares normalised cumulative growth; the lower panels retain burst rhythms in weekly file growth and TouchDesigner save density.]

Project Mass

Collect as cumulative growth across financial, communicative, versioning, material, and shared-documentation layers



What matters especially here is that accumulation does not proceed evenly. Some layers grow almost continuously, others in steps, and still others in short series. Expenditure accumulates according to one logic, messages and requests according to another, physical objects are added in jumps, and digital saves gather in bursts. Rehearsals and the performance do not create this mass from scratch; they enter a project that has already grown heavy with files, purchases, traces of communication, and versions of itself. In this sense, Project Mass shows more than simply “how much there was” but how the project preconfigured its own complexity.

There is another layer of Collect that is not always felt immediately. Collection occurs not only because I consciously record materials for work, but also because, under conditions of distributed agency, technological systems are constantly gathering data on their own: fitness trackers, LLM context windows, chat histories, file metadata, and device logs. We allow ourselves to be captured, often barely sensing the weight of these traces in the moment. Such data concern bodily functions, behaviour, moods, and social relations; they continue to circulate and may live a social life of their own, independently of whoever originally produced them (Lupton 2016, 10-11). Yet in retrospect, they return as possible material for interpretation. They, too, enter the project's orbit, even if at first they seemed incidental.

Collect, therefore, concerns not only things but also a mode of perception. For something to become worthy of capture, it must at least for a moment be recognised as significant. That gesture already contains a future choice, even if it has not yet been named as such. Some things enter the archive; others do not. Some are given a chance to return; others disappear without a trace. The project grows through precisely these almost everyday decisions about significance. And the more it grows, the stronger the temptation to keep capturing, as if the next link, the next scheme, the next component, or the next version might still save the whole. This logic is familiar to any production that lives at once through ambition and lack of time.

Read in this way, Collect already contains the future problem of Allocate. Everything gathered will later begin to demand assignment: time, attention, money, space, decision. Project mass does not lie beside the work; it gradually changes the conditions under which the work can continue at all. The next section begins where accumulation first collides with scarcity.

6.2 Allocate

Allocation begins at the moment when what has been collected ceases to be mere mass and demands assignment. Traces, materials, ideas, purchases, drafts, agreements, and technical decisions each receive a limited resource: time, attention, money, priority, physical space, or embodied energy.

Slots function here as the unit of that capacity. They are a metaphor for attention, time, channels of production, working will, and available psycho-physical capacity. There are always fewer of them than one would like, and every trace accumulates, competing for a place within a day, a week, or a stage of production. A slot is not given by nature; it is produced by schedules, deadlines, expectations, budget, a sense of urgency, and sometimes self-coercion. Allocation is therefore never neutral. It already contains a decision about value, urgency, and permissible displacement.

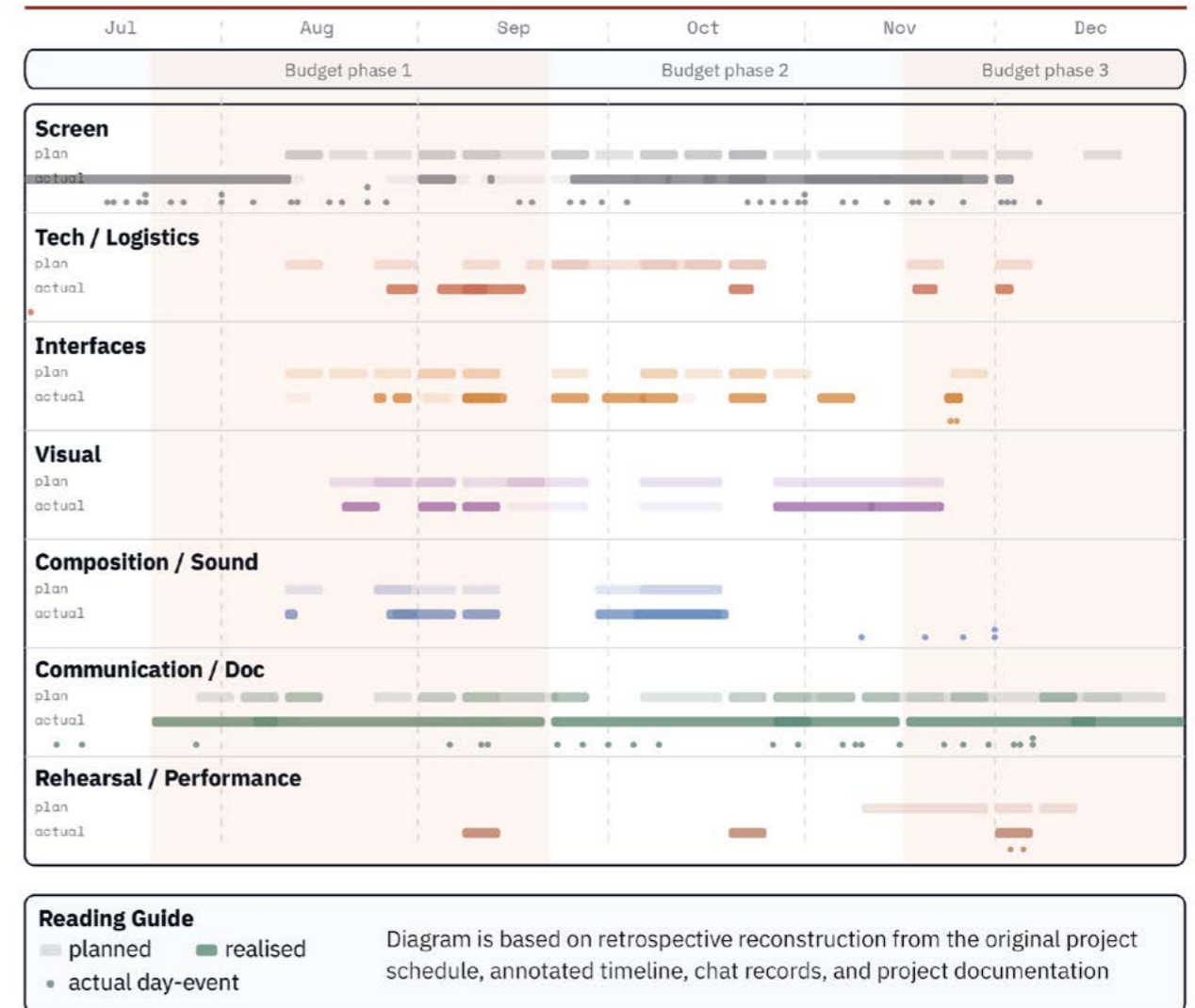
In practice, the gathered material becomes a sequence of working blocks: rehearsals, purchases, programming sessions, screen assembly, contractual and organisational actions, technical setup, and the creation of the visual layer. At this level, the schedule matters as an orienting structure: it makes a presumed sequence and distribution of effort visible, even though the actual course of work is shaped by fatigue, urgency, breakdowns, delays, and situated decisions. This is precisely where Suchman's point becomes useful: a plan does not exhaust the actual course of situated action (2007, 45).

Positivity meets capacity here. Money also operates as a slotting mechanism. It determines which actions can be launched at all, postponed, or compressed.

[Figure 4: Planned and realised work across the project timeline, reconstructed from the original schedule.]

Allocate: Planned vs Actual

Planned and realized work across the project period, reconstructed from the original schedule and retrospective timeline analysis.



Working in a small team on a production that spans time and is constrained by limited finances, while also driven by ambition, imposes an obligation to multitask and embrace multidimensionality. For me, this meant planning and executing the budget, obtaining materials, coordinating the team, drafting contracts, creating the visual layer and interactive architecture, installing and debugging technical equipment, and even sewing screens.

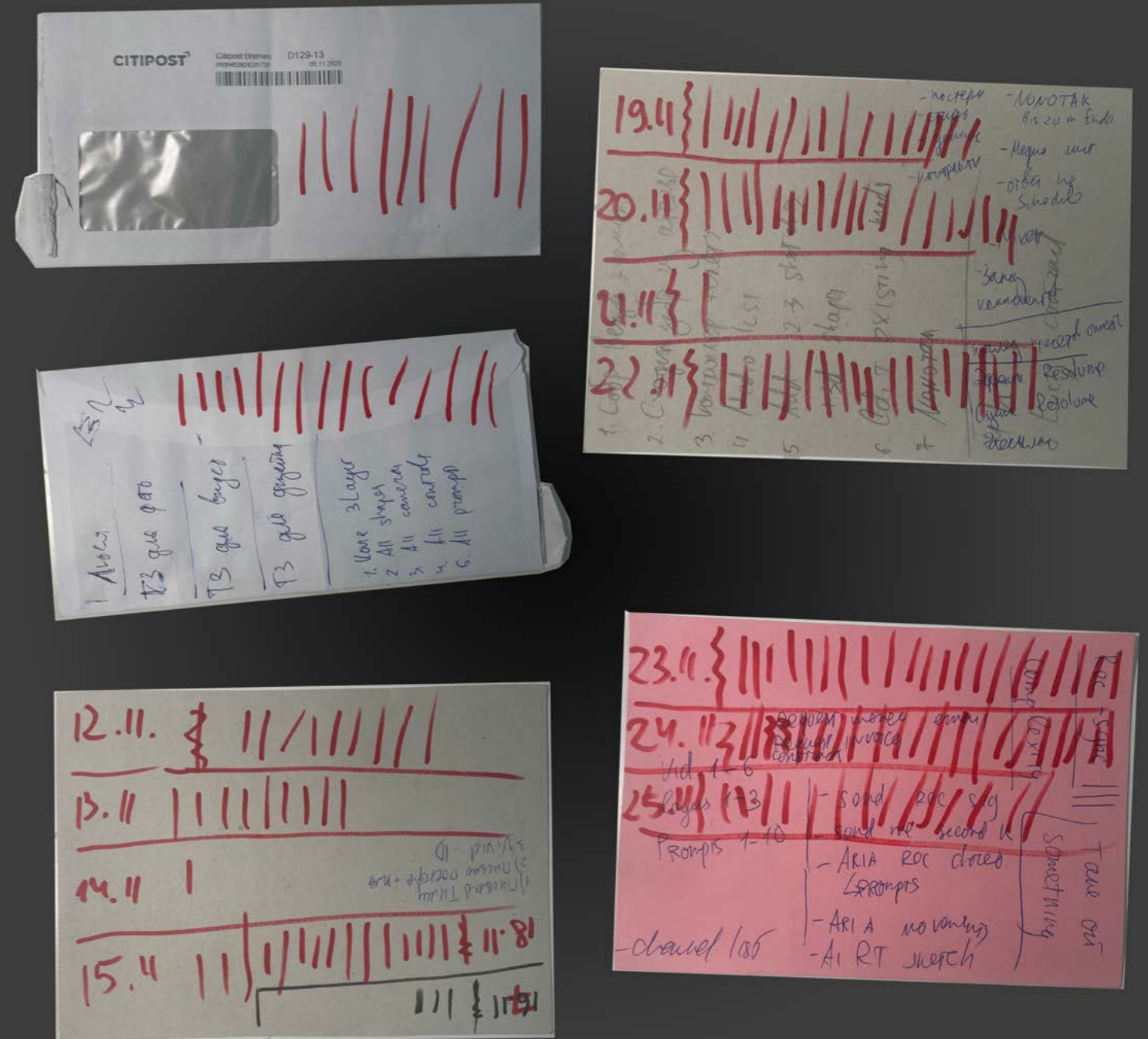
The practice of allocation regularly meets resistance. In retrospect, the schedule also offers only partial access to what took place. It preserves order, deadlines, and intentional distribution, but it cannot retain the doubts, returns, shifts, and small reconfigurations through which the work actually rushed forward. This again corresponds to Suchman's point that plans neither determine nor adequately reconstruct situated action (2007, 45). The ability to orient oneself within one's own work sequence is itself a resource that can be exhausted.

During the period of greatest strain, when less than a month remains before release, the limitation of resources turn more palpable. At that point, I chose a universal unit of attention against which labour would press. It became the culmination of a practice of guaranteed and efficient slot-filling.

At this point, labour is registered less as a completed task than as occupied time. In Thompson's terms, this is where "not the task but the value of time" becomes dominant (1967, 61). The red mark condenses that logic into a minimal sign of directed effort.

The mark is drawn after the fact, as a sign that the slot has been lived in the direction of the project, that attention was held, at least for a while, within the desired vector. There is something almost primitive about it: a date, a row of strokes, half an hour, a trace left behind. Yet precisely this simplicity matters. In this practice, a harsh morality of time comes to the surface: Thompson writes that in a mature capitalist society, merely to "pass the time" becomes offensive (1967, 91). Read in this way, the red line is not only a means of self-organisation but also a symptom of intolerance towards time that cannot be presented as used.

[Figure 5: Photographs of the red marks]



The red mark makes slot occupancy visible, turning the abstract “I think I worked” into a trace that cannot be fully cancelled after the fact. Redline is not a marker of result but a marker of directed state, an attempt to move oneself from procrastination into action.

Yet shifting from one dopamine needle to another generated dependency, and at times, compromises with myself began to erode the value of the mark. More interestingly, however, this practice made me ask: if the point is to fill the slot, is it good to have many of them? How many? Does that mean it was a good day? Did it bring me, or the project, any closer to the best possible present or future? In this sense, the red mark works as a small contract with myself while also introducing another layer of pressure, corresponding to the internalised demand to keep translating possibility into output under a “deceptive feeling of freedom” (Han 2015, 49).

Allocation also touches agency. Who exactly occupies the slot: me, the task, the schedule, someone else’s expectation, the already accumulated archive, guilt about the previous day? The more the project expands, the less transparent this distribution becomes. Freedom here easily turns into a mechanism of coercion: the more possibilities appear to be available, the stronger the pressure to fill them correctly. The slot responds less to an urge for regularity than to a growing necessity to stabilise work under conditions of mounting project density. At that point, work begins to seem less like a flow of possibilities and more like a process of distributing scarcity.

6.3 Delegate

Delegate names the moment when the ball is thrown to another and the work is pushed forward. The specificity and difficulty of this moment lie not so much in the fact of passing on a task as in the conscious externalisation of agency.

Delegation does not eliminate labour; it redistributes it.

What appears as relief often re-enters the process as coordination, prompting, checking, repairing, and adjusting. This is close to Latour’s account of delegated action, in which work is not simply removed from the human actor but transferred, or “shifted”, to another element in the system (Latour 1992, 229). In this thesis, delegation is therefore treated not as the opposite of effort but as one of its transformations. What is delegated is not only execution, but also uncertainty, responsibility, and part of the pressure generated in the course of production.

The dependence that emerges in the process of delegation is not a sign of frailty or laziness but a condition of production. Tight deadlines, limited attention, limited time, partial knowledge, and growing technical complexity make delegation not a secondary option, but a recurring necessity. It promises speed, structure, and scale, yet it presents its own bill: coordination labour, loss of transparency, the need to set expectations, and the need to revisit them again and again.

In digital production, delegation to humans and delegation to machines increasingly converge within the same interface: a chat. Delegating to people has become more mechanical, driven by brief coordination messages, clarifications, access transfers, alignment, and deadline control. Delegating to machines, by contrast, has become more human-like: it includes explaining context, doubting, choosing between variants together, returning to what has already been said, irritation, clarification, and repeated reformulation of the task. The form of communication may become uniform, but the internal logic of interaction

diverges. Latour’s example of delegated action helps here, especially his observation that “an unskilled nonhuman groom thus presupposes a skilled human user” (Latour 1992, 232).

For this reason, chats became the primary corpus for tracing and comparing delegation. This is evident in the volume of prompting, reformulation, checking, and repair that is returned to the user. The interface may look unified, yet the burden of coordination is redistributed diversely across human beings and machines counterparts.

To compare my subjective sense of delegation as a form of overload and split authorship with something empirical, I set emotional observation against the material of correspondence. A wider methodological context is useful here as well: Li et al. (2024) show that human-LLM interaction could be systematically mapped through recurring modes of collaboration. My analysis moves in a similar direction, but on a different level: rather than surveying systems, I group actual request-bearing events within a single production process.

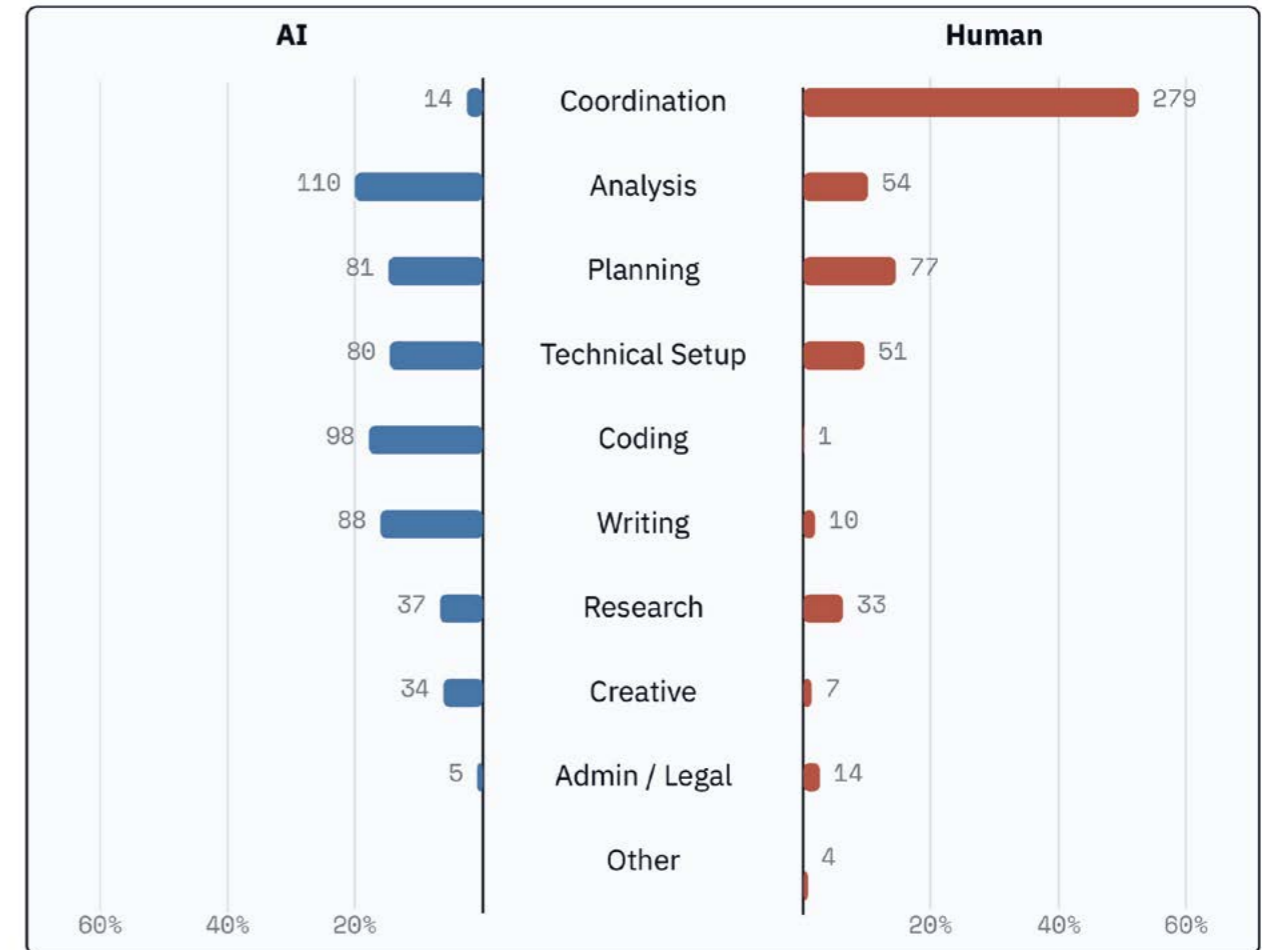
The research corpus included 3,038 of my non-empty messages; 1,171 were labelled as containing a request, 2,143 as containing uptake, and 580 belonged to the overlap subset in which a single turn of communication combined both a request and a reaction to a preceding response. For the task-type analysis, a working subset of 1,077 request-bearing messages was used: 547 AI-directed and 530 human-directed. These results should be understood as descriptive and provisional rather than as final causal conclusions.

[Figure 6: Task-type composition of delegated requests by recipient channel]

The analysis showed that different kinds of tasks were delegated to people and to AI within the project. Human-directed requests are linked above all to coordination and situated execution: coordination accounts for 52.6 per cent, planning for 14.5 per cent, analysis for 10.2 per cent, and technical setup for 9.6 per cent. AI-directed requests, by contrast, concentrate in zones of interpretation, generation, and programming: analysis accounts for 20.1 per cent, coding for 17.9 per cent, writing for 16.1 per cent, plan-

What Was Delegated

Task-type composition by recipient channel. Bars show within-channel share; numbers show raw counts.



Reading Guide AI Human Bar length = within-channel share Numbers = raw counts
 Shares are normalized within each channel; the figure compares composition rather than overall conversation volume.

ning for 14.8 per cent, and technical setup for 14.6 per cent. At the aggregated-family level, AI is especially drawn to Interpretation (41.7 per cent), Generation (22.3 per cent), and Programming (17.9 per cent), whereas the human side is more strongly tied to Execution (64.9 per cent). Particularly telling is that coding is almost entirely displaced towards AI: 98 cases against 1. Planning, meanwhile, acts as a bridging category. Its share is almost identical on both sides, but in one case, planning works as exploratory structuring, while in the other, it is embedded in coordination and shared execution. The distinction, then, is less between the “living” and the “non-living” than between different kinds of externalised work.

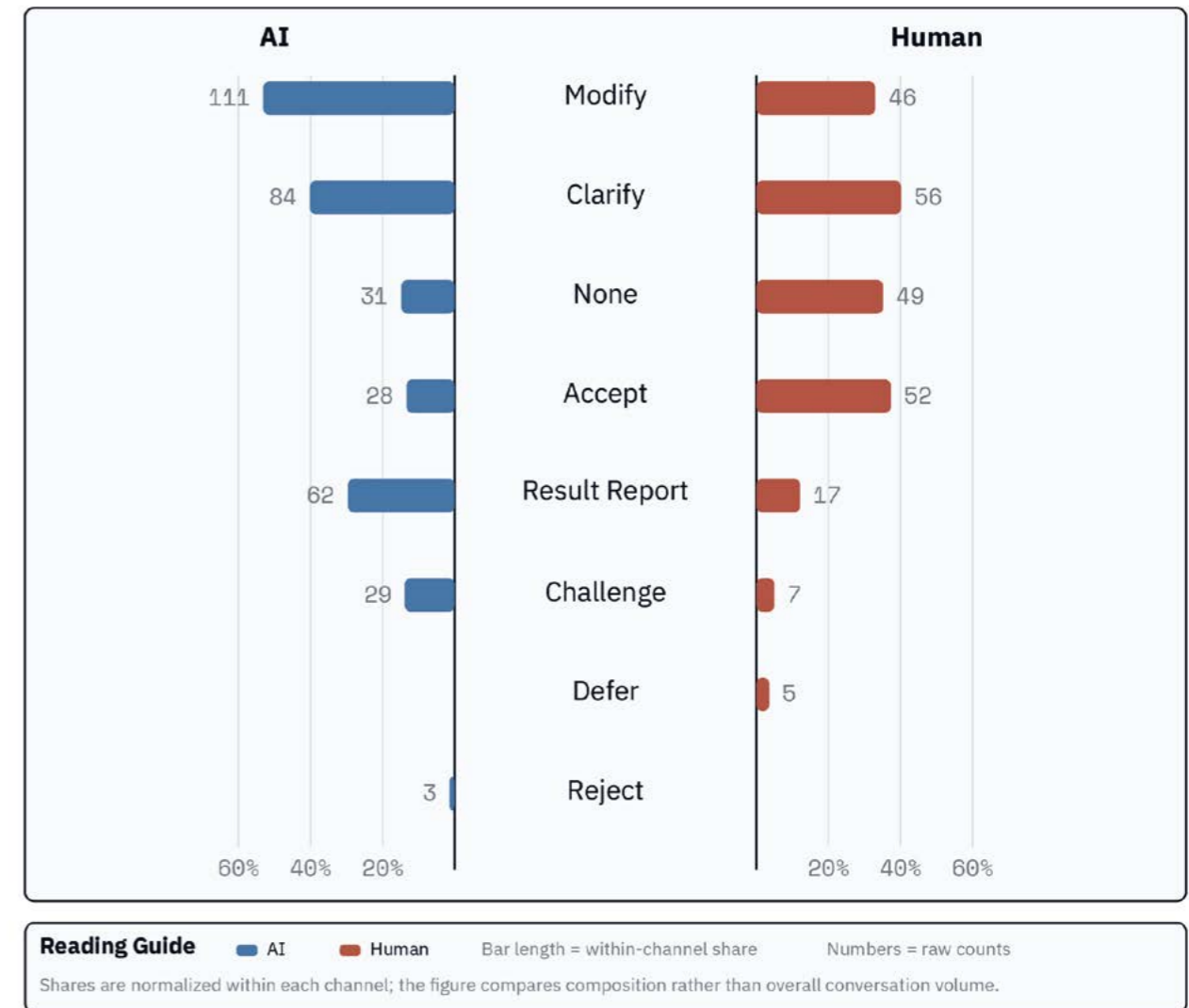
Admin / Legal is likely undercounted as a primary category because mixed messages were coded by dominant action rather than by thematic domain. In practice, contract-, invoice-, and budget-related requests often appear embedded within coordination or writing acts.

Yet delegation can be read not only through task type but also through what happens after a response. What matters is not only the request, but the loop request -> response -> uptake. Uptake becomes the site where authorship is negotiated: whether to accept, clarify, modify, challenge, or dissolve a response into the next step of work. In the current overlap / request-bearing subset, AI-directed interaction appears more revision-heavy: after AI responses, modify occurs more often (31.9 per cent against 19.8 per cent for humans), as do result_report (17.8 per cent against 7.3 per cent) and challenge (8.3 per cent against 3.0 per cent). Human-directed interaction, by contrast, more often ends in acceptance (22.4 per cent against 8.0 per cent) or moves into weakly explicit continuation, coded here as none (21.1 per cent against 8.9 per cent). Clarify remains equally significant in both cases at 24.1 per cent, which means clarification should be understood not as an AI-specific problem but as a structural mechanism of delegation as such.

[Figure 7: Uptake after response in human- and AI-directed interaction.]

Uptake After Response

How work continued after a response in AI and human-directed interaction.



These differences allow us to describe the price of delegation more precisely. What first appears to be a saving of time creates, in practice, a new architecture of labour: task formulation, response supervision, testing, re-prompting, verification, and repair. Delegation does not automatically remove tension; it often merely changes its form. This is where authorship anxiety develops as well: the result may sound like me, retain my lexicon, style, and project memory, and yet have been produced not by me alone. At this point, delegation ceases to be merely a technique of acceleration and becomes a site where responsibility, control, and guilt are distributed. That is why the most difficult moment of delegation is externalised agency.

The difference between human and AI delegation also appears affectively. Interaction with AI more often supports a cycle of iterative revision: check, report the result, request a new version, challenge. Interaction with people is more strongly constrained by sociality, expectation, and the autonomy of the other. For that reason, AI more often appears in this corpus as an externalised cognitive-productive layer of the project, whereas the human side appears as the environment of coordination, situated judgement, and joint execution.

Delegation accelerates work, but it changes its internal price. Alongside the result, a new layer of coordination, dependence, and authorship anxiety appears in the project. It is within this externalised agency that overload begins to accumulate most quietly.

6.4 Overload

At some point, a mass of traces has been gathered, slots have been distributed, and part of the agency has been externalised. The work keeps on moving, but the movement becomes viscous. Every next task drags several previous ones behind it, every decision arrives late, and every single delay starts to act as a multiplier. It is now a mode in which production loses its inner lightness and begins to feel like pressure.

Overload enters this work as the moment when the project no longer fits within the available capacity of attention, body, and time.

I reconstruct the project's chronology through FigJam edits history, the schedule, chats, the calendar, diary notes, marked-overload events, and embodied traces left in sleep and heart-rate data. These data do not claim to serve as a final diagnosis. Their force lies elsewhere: they make it possible to see how the limit appears across several layers at once, in the density of the schedule, the sequence of breakdowns, bodily fatigue, and the changing relation to one's own material. This chronology suggests that overload is most usefully read not as a single continuous curve but as a phased process.

Within this process, I distinguish six phases: Early Destabilisation, Dense Accumulation, Threshold Crisis, Salvage Concentration, Terminal Push, and Afterimage. This breakdown provides a more precise view of production than the simplified "approaching the deadline" scenario. Overload begins earlier than it becomes perceptible. First, there is an unstable start, then a period of intense parallel work, then an explicit crisis of dependencies, then compressed salvage concentration, and only after that a late residue that keeps resonating in the body even after the event has formally ended.

[Figure 8: Overload-related metrics across project phases.]

The phase Early Destabilisation covers July and August. Formally, the project has already begun, yet from the start it contains a fracture: the expected screen collaborator drops out, uncertainty grows, and the launch is broken up by the search for a replacement, budgetary caveats, and postponed decisions. It is still a quiet phase. There is little in it that is spectacular, but there is already a disturbed rhythm, weak inertia, and reduced confidence in the trajectory of the work. What matters here is that a slow start is not the same as emptiness. It already belongs to overload; its language simply still sounds like delay and instability.

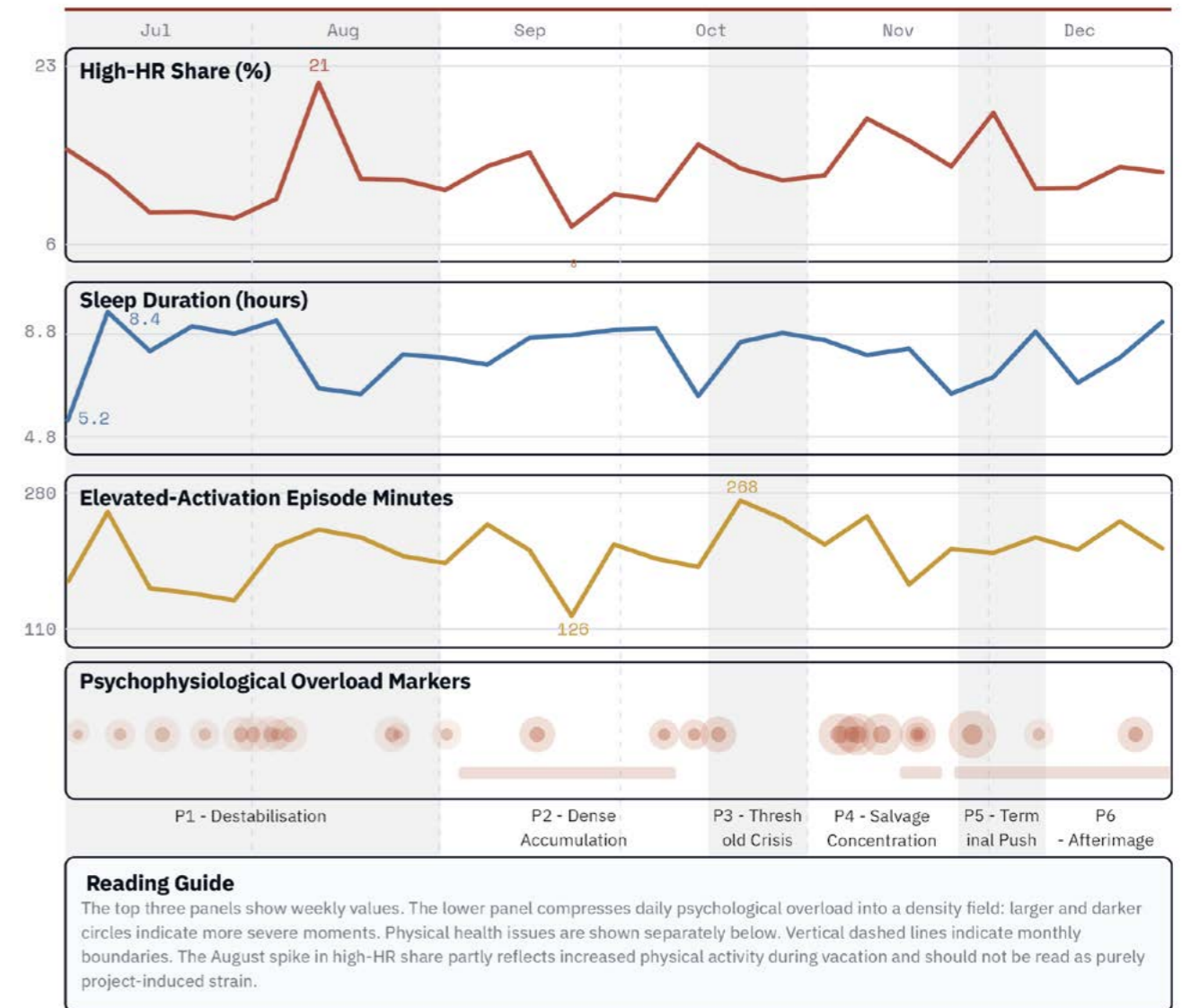
Next comes Dense Accumulation, spanning September and most of October. During this period, the project begins to look productive, even convincing. The pipeline is saturated with parallel lines of work: the screen, interfaces, visuals, contracts, logistics, and rehearsal preparation all proceed at once. That is precisely why this phase is deceptive. From the outside, output is visible; inside, compression is growing. At the level of the timeline, this is where the most sustained density appears: many lines are operating simultaneously, and each demands continuation. Overload is not yet felt as a crisis, but it has already entered the system as parallelised production that consumes calm.

Threshold Crisis arrives in the second half of October. Here, accumulation ceases to be merely dense and turns into a bottleneck. Problems with the screen and its assembly begin to compromise other lines of work: content readiness, interaction testing, the usefulness of rehearsals, and confidence in the whole trajectory. The project has not yet collapsed, but it is already moving through a blockage. This is a turning phase, in which the question “how much is happening?” gives way to the question “what can now follow what at all?” The wearable-data layer also sharply registers this period: it is here that the highest daily burden of elevated-activation episodes is recorded, at 250 minutes per day. At this point, pressure already has embodied weight. Compromises become difficult, and excess effort is spent on radical decisions intended to preserve the initial concept.

The November phase of Salvage Concentration became one of the mo-

Overload Timeline

Embodied overlay across project phases. Separate raw metrics



tivations for making this work. The basement at Urbanscreen functions as a rescue workspace: sewing the screen, reducing the scale, physical fatigue, irritation, and recurring rescue cycles gather into one dense environment. It is here that the project is experienced as a sustained overload field, and overload becomes physiologically noticeable. In mid-November, the practice of red marks also appears: a mechanical verification that the slot was in fact filled. At this moment, the value of a working block becomes excessively high. It is no longer enough simply to have spent the time; it has to be fixed, confirmed, and subordinated to the task. The red mark becomes a small disciplinary contract with oneself and, at the same time, places an extra layer of burden. At this point, self-tracking no longer looks like a neutral observation technique. It enters the affective economy of production: data can confirm effort, irritate, disappoint, and intensify the sense of insufficiency when one's own effort is experienced as not enough (Lupton 2016, 68-70). The red mark therefore, functions both as confirmation of effort and as an additional source of pressure.

Then comes Terminal Push, the first nine days of December. By this point, the red-mark practice has already fallen away: it runs from 10 to 25 November and stops on 26 November. The practice of psychological self-observation has also disappeared. In this “silence”, pressure has already been compressed into a narrow window of execution, where work continues beyond comfortable working hours. It is precisely this phase that yields the highest high-HR share, 13.93 per cent, as well as the highest off-hours high-HR share, 4.32 per cent. In this mode, the day no longer holds as the sole frame of work.

[Figure 9: Comparison of project phases in the overload chronology]

Phase Comparison

Dots show phase values for embodied metrics



After the event, Afterimage remains. The project is over; the applause has faded. Yet this stage contradicts the beautiful legend of the deadline being successfully met. The pressure of the project subsides, but the body continues to live in its tail. Sleep shortens, tolerance decreases, the material itself begins to provoke aversion, and physical and emotional recovery proceed unevenly and slowly. In the accessible data layer, this phase shows the shortest average sleep duration, 6.53 hours, while overall activation does not return to baseline in a single movement. Overload thus belongs not only to the peak but also to the time after it. Recovery has its own form, and it does not coincide with the completion calendar.

Read together, these phases show that body and schedule move out of sync rather than in parallel. Dense Accumulation is structurally the most crowded phase, yet it is not the main physiological peak. Threshold Crisis is where the burden suddenly condenses. Salvage Concentration holds tension over time like an extended field of rescue work. Terminal Push drives activation into the late hours, while Afterimage carries the overload beyond the production calendar would suggest. In this sense, overload is not most accurately understood as a breakdown or an anomaly, but as the point at which the project hits its limit.

Flush does not overcome that limit; it merely clears enough space for movement to go on in a reduced or altered form.

7. Installation and Visitor Experience as Rematerialisation

In the previous sections, the project was read through traces, slots, delegation, and overload; in the installation, those same relations take material form.

The space is organised as a set of interconnected analytical devices. At the centre stands the cube, the Collection Chamber. Around it are light and sound objects that serve as both carriers of shadows and slots. Opposite stands the Allocate station with paper, illumination, and a marker. Perforated plaques add another layer of reading. Together, they form an environment that embodies collection, allocation, overload, and moments of release. One might also say, following Akrich, that the installation already contains a particular script of participation: a framework within which possible gestures, traces, and modes of entering the system are distributed (1992, 208-209).

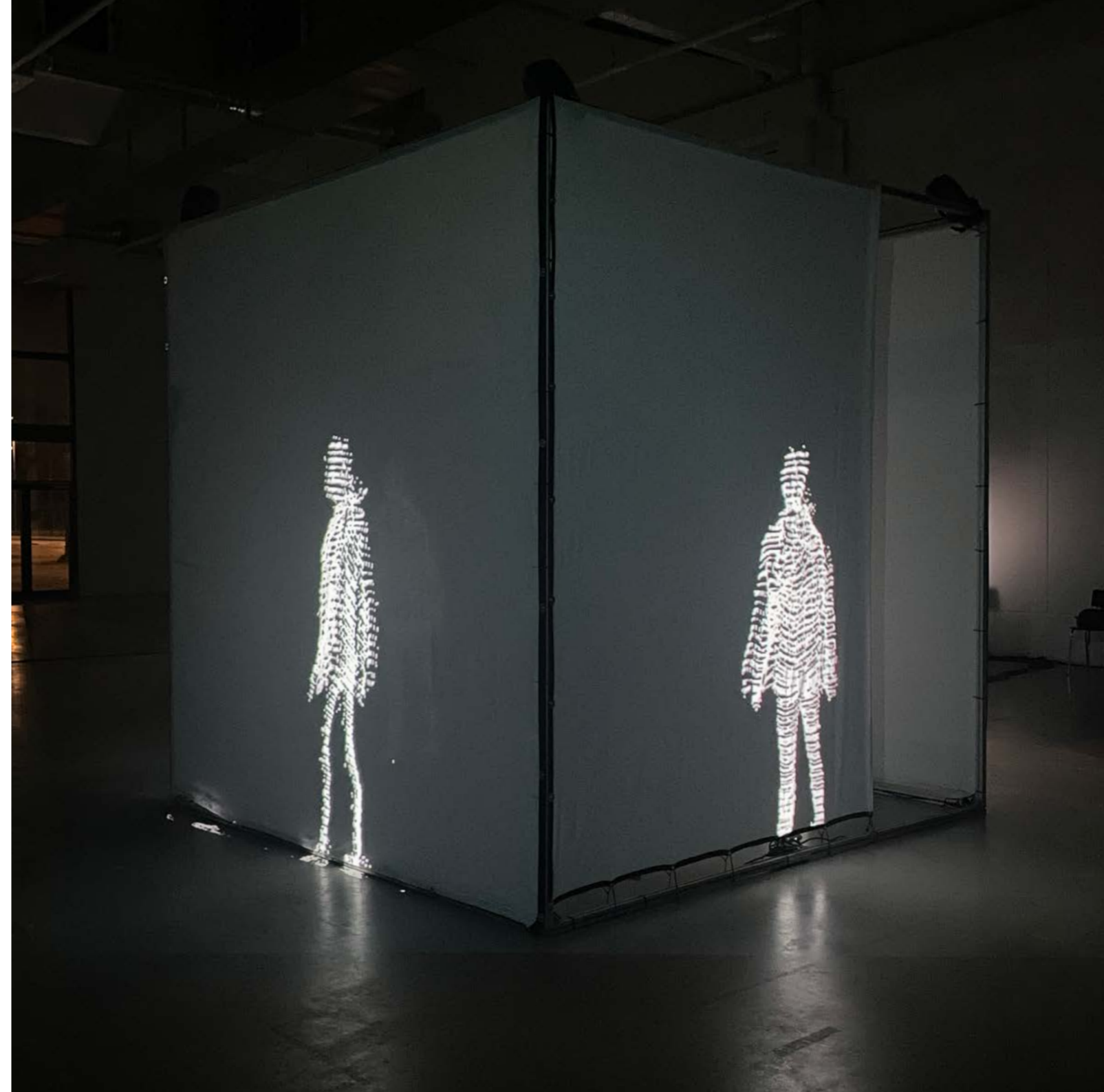
The cube remains the central figure because it also inherits the material entities of umbra. The aluminium profiles, screen fabric, cameras, cabling, and some of the surrounding objects already belonged to the earlier work and now return in a new mode. This renewed assembly preserves the connection to the previous project and makes that connection part of the method: remnants continue to act after temporarily leaving the archive.

[Figure 10: Collection Chamber (cube), the primary site of capture and trace generation in the installation]

Inside the cube, the visitor enters a point of capture. Cameras and sound record presence and turn it into a shadow, into a point cloud, a recording, a trace that immediately enters the system's memory. On the cube's surface, one may see one's own point-cloud image, but almost never in isolation: earlier traces returned from the archive are already present alongside it. A new trace emerges immediately within an already occupied field of memory.

From there, the shadow begins to circulate through the slots. The walls of the cube and the surrounding light-sound objects form a limited field of display and processing capacity. Fresh recordings move through several positions, then pass into the archive and may later be returned by the system. Even without further action on the viewer's part, the work does not come to a halt: memory continues to replay, displace, and layer traces. In this way, the installation is felt as an agent with an internal labour of its own.

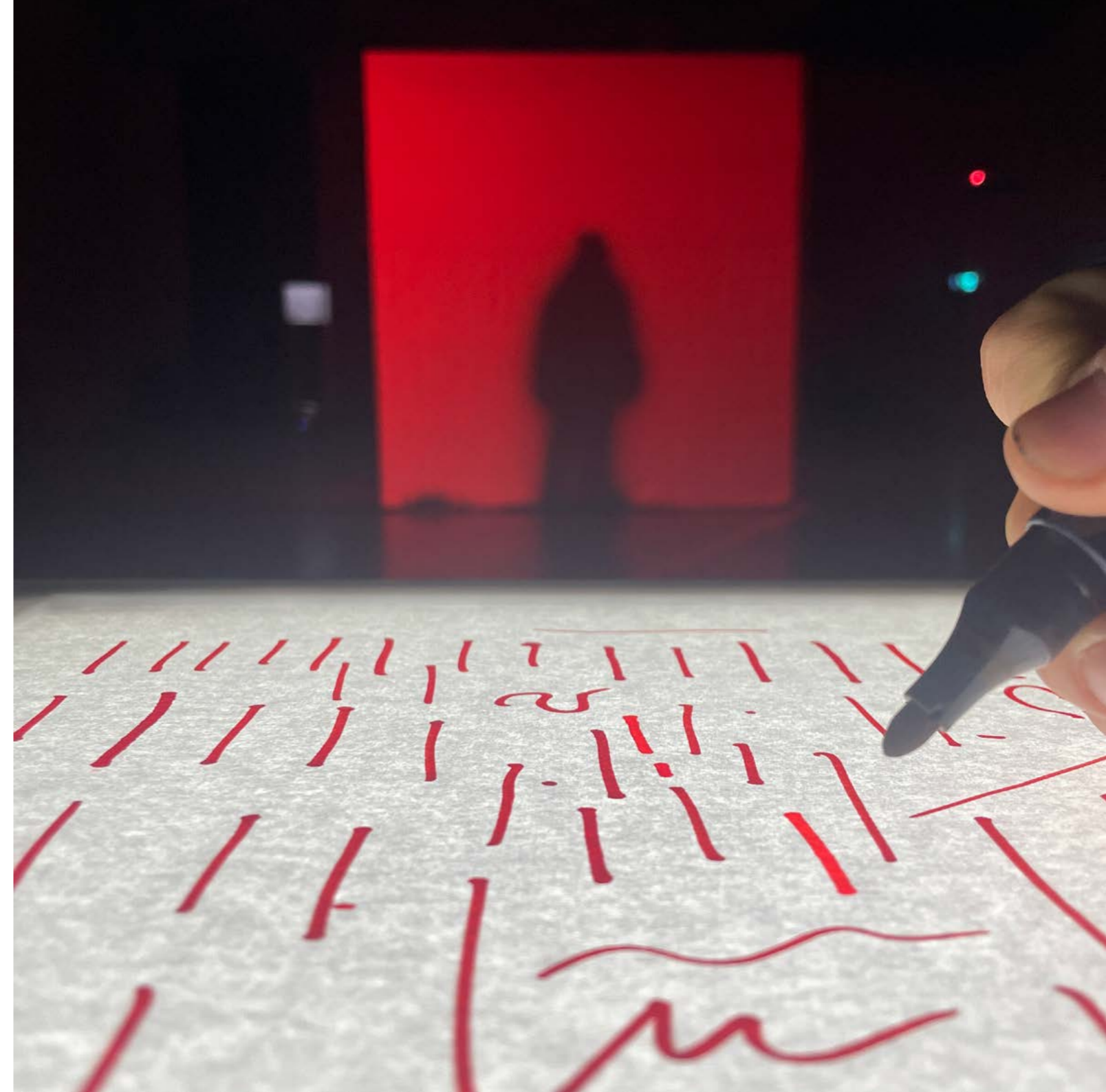
The Allocate station introduces another type of participation. The visitor is invited to draw a red line with a marker. This gesture refers back to the redline practice, in which the mark confirmed that a slot of time had indeed been lived in the direction of the project. In the installation, the red line works as a trigger: a camera beneath the paper recognises it and prompts an additional assignment of memory to a slot. To take the marker in hand is to share agency with the system and intervene in its distribution. The object already presupposes a certain gesture and its consequences, yet each action of participation is assembled anew in the encounter between that script and the specific visitor (Akrich 1992, 209).



[Figure 11: Allocate station. A red line drawn by the visitor triggers an additional memory allocation in the system.]

This is precisely how Allocate and Delegate operate here. Entering the chamber initiates collection. The red line initiates allocation. Participation intensifies the circulation of traces and changes the system's behaviour. The visitor passes over image, sound, and gesture to the system, then watches as that trace continues to live beyond their control. Delegation in this experience is felt nearly literally: the system determines when and where the trace will appear again.

The visitor's interaction can be read as a sequence of operational states through which the installation alternates between capture, circulation, overload, and release.



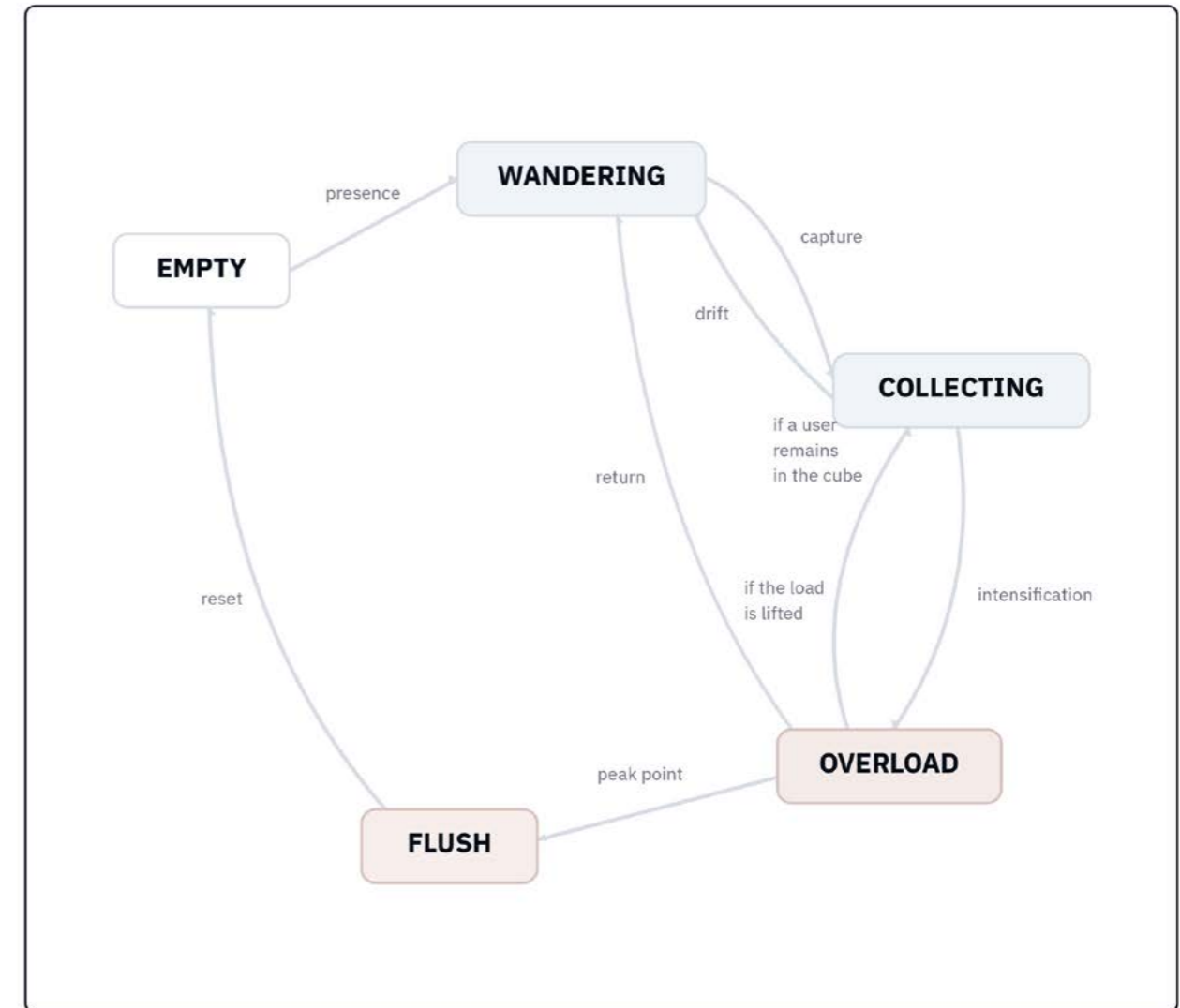
[Figure 12: Installation state logic. The visitor's presence and gestures move the installation between waiting, circulation, capture, overload, and release. While wandering and collecting can oscillate, overload may either return to circulation or trigger a flush-and-reset sequence.]

Overload, too, forms part of the experience. When recordings and triggers become too numerous, the system begins to operate under pressure: images and sounds thicken, reactions lose their smoothness, and memory appears overloaded. Then, Flush arrives, a moment of release in which some traces disappear, fade out, become distorted, or return already damaged. At that point, memory reveals itself as an unstable environment in which retention and loss coexist.

The perforated plaques, together with the publication, complete this assembly. They introduce delay, filtering, and incomplete knowledge. Looking through perforation, reading fragments of text, encountering remnants of the earlier work, all of this is meant to hold the visitor within the logic of traces and processing. The installation thus seeks to describe the creative process as a limited, vulnerable, and partially autonomous system in which collection, allocation, delegation, and overload can be felt bodily, and in which the thesis is carried into space beyond the text.

Installation State Loop

State logic of visitor interaction, capture, allocation, overload and reset to the original state



8. Conclusion

This work began with the residue left after a project, with the sense that completion does not automatically bring clarity. After an intensive production, what remains is not only documentation, material elements, and digital files. It is also harder-to-grasp traces: the tension of coordination, dispersed agency, the embodied price of overload, and an altered relation to one's own material. It was precisely from this condition that the need for Embodied Debrief emerged: a way of returning to the process through what it left behind, a situated and accountable inquiry (Haraway 1988, 8-9).

Through this return, it became possible to recognise that creative production under conditions of technological abundance and distributed agency cannot be reduced to a linear chain of tasks. It unfolds as a system of accumulation, allocation, externalisation, and limit. Collect showed how the project acquires mass through different registers, and how the desire to capture itself becomes the beginning of a future burden. Allocate made visible the struggle over limited slots of time, attention, and resources. Delegate revealed that delegation redistributes not only work but also uncertainty, coordination, guilt, and authorship. Overload named the threshold at which accumulated pressure no longer fits within available capacity, while Flush appeared as a gesture of release through which the system regains the ability to move forward.

One of the main outcomes of this work was a shift of perspective from outcome to process residue. What usually stays at the periphery of documentation became here a carrier of knowledge. Chats, schedules, redline sheets, embodied notes, sleep and heart-rate data, digital versions, budget traces, material remnants, and the very logic of the installation made it possible to see production as a layered environment in which decisions do not belong fully to any single agent, while attention and control are constantly redistributed. In that sense, the research made the hidden cost of creative labour legible: coordination burden, authorship tension, delayed recovery, and the pressure of self-management.

It was equally important that this method did not stop at analysis. The installation returned the research model to space, where the visitor can enter it bodily: to be captured as a trace, to intervene in the distribution of memory, to intensify the circulation of traces, and to encounter overload and release. In this way, the thesis does not simply describe a process; it translates it into a lived environment. The analytical model and the exhibition form work together here as two sides of the same debrief.

This approach also has its limits. It does not promise full objectivity, it does not exhaust every causal relation, and it does not transform a personal case into a universal formula of creative labour. Many readings remain situated, partial, and dependent on the way traces are reconstructed. The work does not seek to close all tensions through a final conclusion, remaining instead “constructed and stitched together imperfectly” (Haraway 1988, 11-15). Friction remains amid control and letting go, between support and dependence, between archive and overload, between authorship and distributed agency. It cannot simply be eliminated.

I would like the value of this work to lie precisely in that form of honesty. Not in catastrophising production, and not in turning suffering into heroism, but in the ability to make the process readable without smoothing over its contradictions. Embodied Debrief, in this sense, works as a way of restoring a relation to lived experience: not erasing it, not romanticising it, but assembling it again into a structure from which meaning, form, and the next question may be drawn.

The friction between archive and overload, between support and dependence, between management and release, does not disappear. This work only seeks to make it more legible. Traces do not vanish with the event: they continue to live in the body, in memory, in infrastructure, in algorithms, and in new cycles of work. My medium here has indeed turned out to be a medium of residue.

References

- Akrich, Madeleine. 1992. "The De-Description of Technical Objects." In *Shaping Technology/Building Society: Studies in Sociotechnical Change*, edited by Wiebe E. Bijker and John Law, 205-224. Cambridge, MA: MIT Press.
- Borgdorff, Henk. 2012. *The Conflict of the Faculties: Perspectives on Artistic Research and Academia*. Leiden: Leiden University Press.
- Derrida, Jacques. 1996. *Archive Fever: A Freudian Impression*. Translated by Eric Prenowitz. Chicago: University of Chicago Press.
- Han, Byung-Chul. 2015. *The Burnout Society*. Translated by Erik Butler. Stanford, CA: Stanford University Press.
- Haraway, Donna. 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14 (3): 575-599. <https://doi.org/10.2307/3178066>.
- Latour, Bruno. 1992. "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts." In *Shaping Technology/Building Society: Studies in Sociotechnical Change*, edited by Wiebe E. Bijker and John Law, 225-258. Cambridge, MA: MIT Press.
- Li, Jiayang, and Jiale Li. 2024. "A Map of Exploring Human Interaction Patterns with LLM: Insights into Collaboration and Creativity." *arXiv*. arXiv:2404.04570. <https://arxiv.org/abs/2404.04570>.
- Lupton, Deborah. 2016. *The Quantified Self*. Cambridge, UK: Polity.
- Suchman, Lucy. 2007. *Human-Machine Reconfigurations: Plans and Situated Actions*. 2nd ed. Cambridge: Cambridge University Press.
- Thompson, E. P. 1967. "Time, Work-Discipline, and Industrial Capitalism." *Past & Present* 38 (1): 56-97. <https://doi.org/10.1093/past/38.1.56>.

Repository and Documentation

Expanded documentation for this project, including methodology, documentation, technical notes, and supporting material, is available in the accompanying repository. The QR code / link below provides access to the current version.



umbra documentation

www.slavaromanov.art/2025/umbra



in the digital shadow repository

github.com/davinel000/inthedigitalshadow

Photo Credits

Performance photographs reproduced in this thesis are by Jimi Liu (figures 1, 2), installation photographs are by Slava Romanov (figures 11, 12).

Acknowledgements

I would like to thank the umbra team and collaborators: Chi Him Chik, Alex Reinig, Leonard Spillner, Juan Luque, and Lucy Savelyeva.

My thanks also go to Dennis P. Paul, Ralf Baecker, Jimi Liu, Nilya Musaeva, Ali Mukhametov, Markus Walthert, Patrick Peljhan, Alena Romanova, Urbanscreen GmbH & Co KG, Zentrale Ausleihe, and Schwankhalle.

And finally, to Sancho the Cat.

The project and repository documentation were developed with editorial and analytical assistance from GPT Codex (5.2-5.4); AI tools were used for selected editing, restructuring, coding, and analysis support; interpretation, curation, selection, and final responsibility remain with the author.