

THE DATA ARTISAN

*The Canal-Keeper's Craft
from Concept to Practice*

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Tried by the Flow — A Processual Ontology of the Datum, continuity volume
The Data Artisan — The Canal-Keeper's Craft, from Concept to Practice

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The Data Craft

Framing Document — From Concept to Practice

Note on the translation — This translation re-fixes the source text without displacing its substance. A few terms of the corpus have no obvious equivalent in English; the choices made, and how they are to be read, are set out in the section “Translation choices” at the end of the volume. This translation is not frozen: it will evolve with readers’ feedback and with the improvement of the means of translation. The French version is authoritative.

“Making is thinking.”

— Richard Sennett, *The Craftsman*

“Everything that is well made passes through someone’s hands.”

— Contemporary saying

Preamble — Status of This Document

This document does not belong to the trilogy *Tried by the Flow*. It is an acknowledged extension of it. The trilogy keeps to **substance**: it says what is true of the datum independently of the techniques that produce it, circulate it or receive it at a given moment, and for that reason forbids itself from prescribing concrete **form**. The present document makes the opposite bet. Taking as established the substance set out by the three tomes — the datum constituted by a regulated operation: a drawing from the flow of the real fixed by an act of inscription, on its observational route, or an act that institutes it, or a calculation that derives it from other data (Tome 1); its putting into circulation by the act of exchange, transport as a relation between two movements (Tome 2); its reception by the act of reading and the situated reader (Tome 3) —, it allows itself the prescription of form: *what would have to be done, concretely, for a data craft to exist?*

This document answers, moreover, an explicit call. The last two tomes name the data artisan explicitly as a figure that they require but do not form, and refer its shaping to a text distinct from the essay. Tome 2 announces that *“this work of opening paths — which opens the way to a data craft — will be treated on its own, outside the present tome”*, confining itself to establishing its necessity and its scope. Tome 3 sets out the data artisan as a particular case of the referent — *“the referent of the proper domain of the datum”* — which *“is not an established result of the trilogy”* but a *“proposal whose necessity the essay deduces without describing its form”*. The present framing is this elaboration and this shaping. It does not create a new concept: it receives the legacy that the trilogy left at its address, and gives it body.

This change of register commits to another nature of text. Form goes stale with the techniques that carry it: what follows is, by construction, revisable, to be taken up again as tools evolve. The reader is invited to read it as a framing and not as a doctrine — as a workshop plan, not as the rules of a guild.

All the conceptual material used here is established in the trilogy. Doc 6 of Tome 1, *Digging the Canal*, provides the **observational optimum** and the **seventeen competences of processual literacy**. Tome 2 provides **transport**, **propagation**, the **properties of movement**, the **torrent** and **collective wisdom**. Tome 3 provides the **act of reading**, the **reader’s window**, the **mute datum** and the **dead datum**, the **three paths** (ways of not actualizing), the **three postures** and the **probity of the reader**. This document demonstrates nothing again. It puts everything to work.

Part I — Why Speak of a Craft

What a Craft Is

A craft is not a reduced industry, nor a fashionable profession, nor a poeticized hobby. It is a historical form of the organization of work, recognizable by seven stable features:

- **a material** that one works (wood, iron, clay, stone);
- **a gesture** of its own, which transforms the material according to an intention (cutting, melting, turning, polishing);
- **a tool** of its own, which extends the hand and carries part of the know-how;
- **a work** that can be identified, which leaves the workshop and carries the master’s signature;
- **an ethics** of the craft (probity, refusal of defects, respect for the material);
- **a long transmission**, organized in degrees (apprentice, journeyman, master);

- **a community** of practitioners, who recognize one another and hold together the definition of the craft well done.

These seven features define the craft in its substance. The historical *forms* vary — medieval guilds, *compagnonnages*, Renaissance workshops, German *Bauhütten* —, but the substance remains: an artisan is someone who works a material, through a learned gesture, with proven tools, to produce a work they answer for, in a community that transmits the know-how.

Why the Datum Calls for It

The datum presents today a paradoxical configuration. In substance, it fulfils the seven conditions of the craft — it has a material (the flow of the real, and the datum throughout its life), gestures (inscribing, exchanging, reading), tools (measuring instruments, annotation methods, transport media), a possible work (the flow of observation at its optimum, delivered to a situated reader), an ethics (probity), a transmissible know-how (the processual literacy of the three phases), and the embryo of a community (the practitioners of *data*, with no organization of their own). But in form, it is treated as an industrial raw material. It is “collected”, “stored”, “monetized”. The gesture is invisible in it, the work anonymous, the signature absent. What would come out of a good workshop looks like what would come out of a bad one: as long as it is data, it is worth something.

This absence of a craft is not a detail. It is what makes possible the confusion of the three ages (Tome 1), over-engineering (Tome 1), the impediment of transport (Tome 2) and the dispossession of the reader (Tome 3). Where there is no artisan, there is no one to answer for the gesture, no one to refuse to draw what should not be drawn, no one to identify the optimum, no one to make the reader’s share practicable, no one to turn to when one stumbles on a datum one does not know how to read. All responsibility diffuses into an anonymous system.

The data craft is not opposed to the data industry. It occupies a place that industry cannot hold: that of the **signed datum**, made by someone who answers for it, within a framework where know-how is named, transmitted and recognized. Just as an artisan baker is not the adversary of the baking industry but its qualitative complement, the data artisan does not deny the large collection platforms; they occupy the place those platforms leave empty.

The Artisan along the Three Phases

A decisive clarification, which the three tomes impose. The datum has three phases: its making, its circulation, its reception. The artisan does not work only on the first. They make canals at the optimum (Tome 1); they circulate their works with fidelity, making practicable the share of whoever will receive them (Tome 2); and they stand at the edge of the reader, either reading the data of their domain themselves, or — and this

is the essential — serving as a **referent** for anyone who must decipher a datum and stumbles (Tome 3).

On this last point, one must be exact, for it is there that the very nature of the craft is at stake. The artisan is able to read — for themselves, and as their apprenticeship progresses — the data relating to their craft; this capacity gives them ease in questioning any datum about its origins and destinations, without their claiming to *decipher* every datum (deciphering happens at depths relative to each person's corpus). They are above all the referent to whom anyone who must read a datum of their domain turns. And this referent is, in the words of Tome 3, "*not a keeper who dispossesses, but a referent who makes one more autonomous*". The artisan helps; they make autonomous; they do not dispossess. Everything else in this document follows from this line.

Part II — Substance: the Seven Pillars of the Data Craft

Let us take up the seven features of the craft and apply them to the datum, deriving the consequences that the three tomes prepared. Each pillar unfolds over the three phases of the datum.

1. The Material — the Flow of the Real and the Datum along Its Life

The raw material of the artisan is not, contrary to what industry suggests, *the datum itself*. The datum is the work, not the material. The raw material is the **flow of the real and the traces it deposits**. The artisan works upstream of the datum: it is they who decide what, in the flow, deserves to be drawn, at what cadence, with what instruments.

This raw material is singular. It is non-rival (what one person draws from it takes nothing away from another — ontological non-rivalry, which pre-judges no legal regime), inexhaustible in most cases (a drawing does not exhaust the source), perishable (the real moves away from the inscription, at a speed that depends on the piece of the world drawn). The artisan learns to come to terms with these three properties — as the woodworker comes to terms with the grain, the moisture and the fibre of their material.

But the artisan does not leave their material once the datum is inscribed. They accompany it along its life: the datum **in circulation**, which is transported and propagated without being ceded like an object (Tome 2); and the datum **at the edge of the reader**, which will be read — actualized, then operative —, or will not be and will remain constituted, not actualized (Tome 3). The material of the artisan, taken in the broad sense, is the datum throughout its three phases — from the act that constitutes it (on the observational route, a drawing from the flow) to the threshold of reading where it is actualized or remains not actualized.

2. The Gesture — Inscribing, Exchanging, Reading

Where the traditional craft has one founding gesture, the datum has three, one per phase, each set out by one tome of the trilogy.

The act of inscription (Tome 1): on the observational route, which is that of the canal, the decision to arrest a value in a flow that does not stop, and to entrust it to a medium that will maintain it; a datum can also be born of an act that institutes it (a counted vote, a closed balance) or of a calculation on other data (an average, an indicator). Drawing has three components that the artisan must be able to state: *what* they draw (the object), *when* they draw it (the instant, the cadence), *how* they draw it (the instrument, the criterion).

The act of exchange (Tome 2): the gesture, symmetrical to the first, by which the artisan puts a work into circulation. As inscription arrests a value, exchange entrusts it to a transport medium, so that it reaches someone. A datum inscribed and never transmitted remains constituted, but available only in its one place: exchange extends its availability and its possibility of use.

The act of reading (Tome 3): the gesture by which a datum is received — *perceive* → *distinguish* → *decipher*. Shorter than inscription, it never applies to the raw trace, but to data already inscribed according to conventions. The artisan holds it on two counts: they read the data of their domain themselves, and they make legible, for others, what others stumble on.

A craft gesture is *dated*, *situated*, *signed*. It has an author, a moment, conditions. The artisan does not erase these marks: they inscribe them with the work, as a potter leaves their imprint at the bottom of the vase. Anonymity is, in a craft, a sign of poor workmanship — and it is so in all three phases: one must be able to say who drew, who transmitted, and to whom it was addressed.

3. The Tool — Instruments, Methods, Media

The artisan has tools. For the datum, they fall into families that follow, here again, the three phases: **instruments of drawing** (sensors, forms, apparatuses of observation) and **methods of annotation** (grids, classifications, protocols) for making; **fixation media** (formats, registers, databases) and **transport media** (devices that move, transmit, make accessible — according to the minimal typology of Tome 2) for preservation and circulation; **reading tools** (visualization, queries, cross-referencing) for reception. Each tool carries part of the know-how; badly calibrated, it degrades the gesture.

The artisan is not confused with their tool. The sensor is not the canal-keeper; the algorithm does not answer for the reading. The tool serves the gesture; it does not replace it. This distinction, obvious in the traditional

craft, is less so in data — where technical discourse tends to substitute the tool for the gesture. The data craft is built against this substitution.

4. The Work — a Canal at the Optimum, Delivered to a Situated Reader

The work of the artisan is not an isolated datum. It is a **flow of observation at the optimum** — a canal dug, sized, tended, which faithfully restores, for the intended use, what it was designed to capture. And, at the end of the chain, it is a **consolidated datum**: the synthesis that answers the question of use — average, indicator, status, equation.

But a work is not completed by the mere fact of being well made. Tome 2 gives the criterion: transporting a work is not setting it down somewhere; it is making **the reader's share practicable** — transport is a relation between two movements (the datum towards the reader, the reader towards the datum), and it is accomplished only when the reader's share can actually be accomplished. Tome 3 adds the recipient: a work is made to be read by someone **situated**, in a determined **window**. A datum delivered that no one can read — because its reader's share is not practicable, or because it aims at a window where no one stands — is an unfinished work: constituted, it is not actualized in the intended reader, and its value is not realized.

A craft work is therefore recognized by four features: it is *made to the measure of the use* (neither over-calibrated nor below the threshold); it is *durable* within the limit of what its nature allows; it is *signed* — its author is named, its date known, its criteria stated; and it is *deliverable* — its reader's share is practicable, its reader's window is named.

5. Ethics — Probity, Lucidity, Measure, and Care for the Reader

Every craft has an ethics of the trade, which is not an applied morality but a probity internal to the gesture. For the datum, this ethics comes down to four requirements — the first three from Tome 1, the fourth inherited from Tomes 2 and 3.

The probity of inscription: what is inscribed must be inscribed with fidelity. No rounding that flatters, no category that forces, no criterion that serves the intention instead of the material.

Lucidity about lapse: the artisan knows that their work ages. They inform the user of it. They do not pass off a ripe datum as fresh, an archival datum as ripe. They respect the three ages (Tome 1).

Measure in drawing: the artisan draws at the observational optimum. They refuse over-engineering as firmly as under-drawing. *Doing what is needed, neither more nor less*: that is the practical ethics of the craft well done.

The probity of transmission and reception: the artisan does not deliver a work whose reader's share would be impracticable; they signal when a datum risks remaining not actualized, or mute for its reader, without its value being realized; they hold the relation to the reader in the posture of the referent who makes autonomous and does not dispossess. It is here that the teaching of Tome 2 on collective wisdom lodges: *abstention is not neutral*. Not transmitting, not making legible, not making oneself a referent when one could, is not a neutral position — it is letting over-throughput do its work and non-actualized data pile up.

Beyond these requirements, the artisan refuses the gestures that degrade the material, the work or the craft — even when their hierarchy, their client or their institution orders them. They know that this refusal is, in the last instance, the dignity of the craft.

6. Transmission — Apprentice, Journeyman, Master

A craft is transmitted in degrees. The apprentice reproduces under direction; the journeyman practises under shared responsibility; the master answers alone for their work and teaches. This gradation is not a social hierarchy: it is the logical organization of a know-how that is not learned in one go.

For the datum, these three degrees can be outlined along the three phases. The **apprentice** learns to *read*: recognizing a flow of observation, going back to the intention, judging fidelity, identifying the undrawn, distinguishing the ages — and already, perceiving and distinguishing a datum for what it is. The **journeyman** knows how to *build and circulate*: digging a canal at the optimum, maintaining it, regulating the transport of their works, framing the window of their readers. The **master** knows how to *judge and transmit*: arbitrating on substance, anticipating leaps, holding the relation of referent for their domain, reading AI corpora, training in their turn — and their workshop becomes a place of reference.

This transmission is not improvised. It presupposes a framework in which one learns by doing, on real works, under a direction that answers for them. It presupposes a long time — a few months are not enough to train an artisan, whatever their craft.

7. The Community — Journeymen in a Network

No craft holds without a community. It is the community that defines what is done well, what is done badly, what is within the craft and what falls outside it. It ensures mutual recognition, the circulation of knowledge, the defence of the craft against drifts. It has, in the case of the datum, an additional function that Tome 3 brings to light: it is recognition by peers that *institutes the referent* — that designates, for a domain, whom to turn to. Without a community that recognizes, the artisan-referent remains a chance encounter; with it, recourse becomes possible and honourable.

The community of the data craft remains to be constituted. It exists in dotted lines — around certain practices of *data science*, certain civic networks, certain schools —, but it has not taken the form of a craft community conscious of itself. Giving it this form is one of the objects of the present framing.

Part III — Form: Starting the Concrete Creation

With the substance set out, here are six stages for starting a data craft. These stages are neither successive nor independent; they sustain one another. But their logical order is a way of least resistance to begin with.

Stage 1 — Naming

A craft that is not named does not exist. The craft is here **the data artisan** for its general designation, and **the canal-keeper** for its trade name — the one that extends the metaphor of the trilogy and says the gesture explicitly: digging, tending, reading canals. Tome 3 names this figure, moreover, the data artisan, to which *Transport and Propagation* announced the way: “*not a keeper who dispossesses, but a referent who makes one more autonomous*”. The name of canal-keeper, for its part, does not appear in the trilogy; it belongs to the volumes that extend it. The highest degree is that of **master canal-keeper** — the recognized artisan, who trains and serves as referent.

Stage 2 — Establishing a Competency Framework

The trilogy provides the raw material: the **seventeen competences of processual literacy** of Tome 1, to which Tomes 2 and 3 add the competences proper to circulation and reception. Together, they must be *organized by degrees* and *by phases* to become a craft framework.

The organization chosen (and detailed in the *Competency Framework*) follows the three degrees, each covering an increasing span of the three phases:

Degree 1 — Apprentice. *Reading the flow and the datum.* Reading the flow of the real behind the datum, recognizing a flow of observation, going back to the intention and the criteria, judging relative fidelity, identifying the undrawn, assessing freshness and distinguishing the three ages — and already, perceiving and distinguishing a datum, recognizing when it is mute for a reader and when it is dead for all.

Degree 2 — Journeyman. *Building, circulating, tending.* Locating the observational optimum, reconstituting the corpus, thinking the gesture of annotation, distinguishing setting in motion from the relation to the present, recognizing the illusion of continuity, identifying stable sources;

regulating the transport of a work and judging the fidelity of movement; framing a reader's window; maintaining a flow over time.

Degree 3 — Master. *Judging, serving as referent, transmitting.* Criticizing the relevance of the criteria, thinking the loop, anticipating the systemic leap, understanding inter-flow dynamics, recognizing the nature and age of AI corpora; holding the relation of referent for one's domain; arbitrating the three paths; transmitting.

This framework is not frozen. It calls for revisions as the community tests it. But it provides an explicit and defensible starting point.

Stage 3 — Organizing Training

Once the framework is established, training can take shape. Three principles guide its organization.

Learning by doing. No craft competence is acquired by lectures alone. The apprentice begins by working on real flows of observation, under direction. The exercises are works in miniature, not exercises in style.

Long duration. Three months are not enough. Learning the craft well done takes several years — a year at least to become an apprentice, two to three to become a journeyman, perhaps ten to become a master. This long temporality is constitutive; it distinguishes the artisan from the certified technician.

Reference workshop. The apprentice learns in a workshop — a real or virtual place where a master practises, where works are produced, where knowledge circulates by imitation as much as by teaching. A training programme without a reference workshop is not an artisan's training; it is a course.

Stage 4 — Federating the Community

Without a community, no craft. Its constitution follows, historically, a recognizable way.

First circles. Identifying the practitioners who already practise this craft without naming it so — *data engineers* attached to quality, public statisticians, digital archivists, data journalists, field researchers. Inviting them to recognize one another under the name of artisan.

Places of exchange. Establishing regular meetings — physical, online — where practices are compared, cases transmitted, difficulties discussed. The community feeds on exchanges about the real craft, not on general principles.

Charter. As exchanges go on, formalizing what the journeymen hold to be the craft well done. This charter must not be born of a committee; it must settle as concrete cases are arbitrated. It will live and evolve with practice.

Mutual recognition. A community holds when its members recognize one another as members. The degrees (apprentice, journeyman, master) are worth something only on condition of being attributed by peers, not by an external authority. It is also this recognition that institutes, for a domain, the referent to turn to.

Stage 5 — Producing Reference Works

A craft is defined by its works as much as by its texts. The first reference works must be identified, documented, disseminated: exemplary flows of observation, analyses whose probity has proved itself over time, canals whose maintenance constitutes a textbook case.

These reference works play three roles. They **prove** that the craft exists and produces. They **teach** by example, which is more effective than by rule. They **arbitrate** debates about what is done well — in case of discussion, one comes back to the works.

Documenting these works requires a particular honesty: it is not a matter of promoting but of exposing. The difficulties encountered, the choices arbitrated, the errors corrected: all this is part of the work, and it is what the apprentice will gain by understanding.

Stage 6 — Obtaining Recognition

Recognition comes last. It is not decreed; it is established when the five previous stages have produced visible effects: trained artisans, an active community, recognized works, a tested framework.

At this stage, forms of external recognition can be sought: professional status, quality labels, equivalence with existing certifications, mention in institutional frameworks (DigComp, CRCN). But these recognitions are only the record, downstream, of a reality that must first have been constituted upstream. Going after recognition too early is obtaining a title without a body.

Part IV — What the Craft Brings About

Constituting a data craft does not change only the fate of a few practitioners. It brings about changes in several domains.

For Training

The teaching of *data literacy* and *data science* today is dominated by the *bootcamp* format — a few weeks, a few months, technical competences on dated tools. This format has its necessity (it equips quickly for precise

functions), but it does not train artisans. The creation of a craft calls for a complementary format: long, by *compagnonnage*, attached to a workshop.

This does not call for the abolition of the *bootcamp*. It calls for the creation, alongside it, of another way — comparable to what distinguishes the technician's certificate from the *compagnonnage* of the *Devoir*, in the building trades. The two coexist; they do not train the same person.

For Organizations

The organizations that employ data practitioners are today structured in industrial teams: *data team*, *analytics department*, *AI lab*. This structuring presupposes that the datum is a raw material processed on a line. The presence of artisans modifies this structuring: a workshop is needed in the organization, where the datum is made by hand when use requires it, alongside the industrial line that processes the rest.

This *workshop / line* distinction is precious. It recognizes that not all data are of equal worth, and that some require craft care — those that guide high-stake decisions, those meant to last, those whose signature matters, those that must be made legible to a precise recipient. The organization that has no workshop is entirely subject to its line; it cannot make the work when it needs it.

For AI

Tome 1 sketched a distributed architecture of AI models, fed by humans who maintain the canals. The data craft is, very precisely, what makes this architecture viable. Without artisans, the canals that feed the models are anonymous, their quality uncontrolled, their lapse ignored. With artisans, each canal is signed, its optimum checked, its freshness monitored.

Tome 3 adds two perils that the artisan is named to ward off. The first is the **re-circulating datum**: a datum really produced by automated inscription, but which no human reads, and which turns between machines without crossing the threshold of reading. The second is **far-reaching delegation**: as humans move away from the datum, their capacity to read atrophies, and two slopes open — the concentration of the capacity to read in a few, and the reversal of the referent towards the machine, up to the risk that a society can no longer read what governs it. The artisan, a human referent recognized for their domain, is precisely what keeps the collective capacity to read open — and what prevents the referent, by default, from becoming the machine alone.

On this point, a discipline inherited from the trilogy: the large language model is not a concept; it is an illustration — a major one, a dated one — of the systemic leap (Tome 1) and of automatic reading (Tome 3). The craft does not have to theorize AI; it has to hold, faced with it, the post of the human referent. AI and the craft are not in competition: AI processes massively; the craft ensures the quality of what enters the machine and the

legibility of what comes out of it. An AI fed by an infrastructure of artisans is radically different from an AI fed by anonymous industrial capture — not by the power of the model, but by the traceability of what it digests and the presence of humans capable of reading it.

For Society

A society that has data artisans is not the same as a society that lacks them. It has, in its various places — administrations, companies, associations, media, research, municipalities —, named, trained, recognized practitioners who can answer for the gesture of drawing, of transmitting and of making legible. The responsibility for the datum ceases to be diffuse; it is located in named persons, in identified workshops.

This location is, in the last analysis, a condition of informed democracy. It is easier to hold an artisan to account than a system. It is easier for an artisan, trained in their probity, to refuse the gesture that should not be made — refusing abusive drawing, refusing the confusion of ages, refusing over-engineering, refusing to deliver a work that its recipient will not be able to read. And it is easier, for whoever stumbles on a datum that governs them, to find a human referent to turn to. The craft introduces, into the anonymous circuit of the datum, points where someone answers — and points where someone still knows how to read.

Conclusion — The Artisan in the Torrent

The contemporary moment — what Tome 2 named and founded as the **torrent**, this regime of the real-marked-by-us, where accelerated circulation and self-amplification produce more data than any gaze can follow — carries an increased requirement of lucidity. This lucidity, the trilogy set out as the condition of freedom in a world made of data. But lucidity, to become effective, must be embodied in gestures, tools, works, named persons. The form it takes, in the world of work, is precisely what the craft makes possible.

The data artisan is not the hero who would save humanity from the torrent. They are, more modestly, the one who *holds a post* in the torrent — who maintains a canal, signs a work, makes it reach legibly whoever must read it, serves as referent for whoever stumbles, transmits to an apprentice, refuses a gesture that deserves it. The whole of civilization does not rest on their shoulders; but something, at one precise point, holds because they are there.

Multiplying these points is the way. Not a revolution, not a break: a slow construction of craft presences, where today there are only anonymous operations. As these presences multiply, the fabric grows denser — and

society as a whole has, in its various places, the quality that artisans carry, and the capacity to read that they maintain.

This document is only a framing. It calls, to become effective, for practitioners who will take it up, workshops that will open, journeymen who will recognize one another, masters who will train and serve as referents. The framing is a lamp; it lights up the area where one must build. The construction belongs to those who will take up the tool.

“Everything that is well made passes through someone’s hands.”

And the datum, from now on, can pass through the hands of an artisan — from inscription to the reader.

Landmarks

For the conceptual foundation of this document, see the trilogy *Tried by the Flow*: Tome 1, *The River and the Canal*, doc 6 (*Digging the Canal*) for the seventeen competences of processual literacy, the observational optimum and the distributed architecture of AI models, and doc 7 (*The Wave and the Ocean*) for the posture of lucidity; Tome 2, *From Spring to Torrent*, for the act of exchange, transport as a relation between two movements, propagation, the properties of movement, the torrent and collective wisdom; Tome 3, *The Trace or the Datum*, for the act of reading, the reader’s window, the mute datum and the dead datum, the three paths (ways of not actualizing), the three postures, the probity of the reader and the referent.

This framing is developed in four application documents, which derive its operational consequences: the *Competency Framework of the Data Artisan* (the competences of the three phases, organized by degrees); *The Data Artisan’s Workshop Book* (the place, the tools, the rituals, the productions); *The Data Artisan’s Apprenticeship Manual* (progressive exercises on real flows); *The Data Artisan’s Craft Charter* (the seven articles of the ethics of the craft). For ready-to-use tools — reading checklist, lapse grid, work signature sheet, canal review —, see the companion volume *The Canal and the Workshops — From Processual Ontology to the Gestures of the Craft*, Part V (“Toolbox”).

On the craft as a category: Richard Sennett, *The Craftsman*, Yale University Press, 2008 (French translation *Ce que sait la main : la culture de l’artisanat*, Albin Michel, 2010); Matthew B. Crawford, *Shop Class as Soulcraft*, Penguin, 2009 (French translation *Éloge du carburateur*, La Découverte, 2010); on the French compagnonnage as a model of long transmission, see the publications of the Association ouvrière des Compagnons du Devoir et du Tour de France.

On historical workshops and guilds: the work of economic history on medieval guilds (Sheilagh Ogilvie, *The European Guilds: An Economic Analy-*

sis, Princeton University Press, 2019) offers a useful comparison of what worked in guild organization and what degenerated.

Framing document, June 2026, to be tested by practice.

Competency Framework of the Data Artisan

Framing Document v1.0.0 — The Three Phases of the Datum, from the Concept to the Degrees of the Craft

“To know is not to prove, nor to explain. It is to accede to vision.”

— Antoine de Saint-Exupéry, *Flight to Arras*

Preamble — Status of the Framework

This document details the competences that the data artisan must master, in their progression by degree (apprentice, journeyman, master). It extends the framing document *The Data Craft* by turning into an operational framework the processual literacy set out by the trilogy *Tried by the Flow*.

It covers the **three phases of the datum**: making (Tome 1, *The River and the Canal*), circulation (Tome 2, *From Spring to Torrent*), reception (Tome 3, *The Trace or the Datum*). The whole forms a coherent structure, legible in one piece: twenty-three competences, numbered continuously (C1 to C23) following the order of the degrees and, within each degree, the order of the three phases.

The framework creates no concept. Each competence rests on a concept already established by the trilogy.

Like every framing document, it is revisable. The practice of the first workshops will correct it. Its function is not to fix the craft once and for all, but to give it an explicit starting point — something no craft has ever been able to do without.

For each competence, four elements are specified: **knowledge** (what one must know), **know-how** (what one must know how to do), **assessment criteria** (by what one recognizes that the competence is acquired), and a

model test (the situation in which the competence proves itself). This grid is deliberately sober: a craft framework is not a university programme; it describes what the hand must know how to do, not only what the head must have learned.

Part I — Architecture of the Framework

The Three Degrees and the Three Phases

The framework crosses two axes. The **three degrees** say the progression of the craft; the **three phases** say the extent of the life of the datum that each degree knows how to take charge of.

Apprentice. The apprentice learns to *read*: recognizing the datum for what it is, identifying the flow it comes from, spotting its limits, and already perceiving and distinguishing a datum received. Their competences are competences of the gaze. They do not yet build an autonomous flow of observation; they accompany those that a master has dug. (Competences C1 to C8.)

Journeyman. The journeyman learns to *build, circulate and tend*: digging a canal at the optimum, regulating the transport of their works, framing the window of their readers, maintaining a flow over time. Their competences are competences of gesture. They take charge of whole canals, under responsibility shared with a master. (Competences C9 to C17.)

Master. The master learns to *judge, serve as referent and transmit*: arbitrating on substance, anticipating leaps, reading AI corpora, holding the relation of referent for their domain, arbitrating the three paths by which an arrived datum is not actualized, training in their turn. Their competences are competences of discernment. They answer alone for the works that leave their workshop. (Competences C18 to C23.)

The Capacity to Read, and the Relation of Referent

A clarification about what the artisan does with the act of reading, for it governs several competences. The artisan is able to read — for themselves, and as their apprenticeship progresses — the data relating to their craft. This capacity gives them ease in questioning any datum about its origins and destinations, without their claiming to *decipher* every datum: deciphering happens at depths relative to each person's corpus, and no one deciphers everything. The artisan is above all, for their domain, the **referent** to whom anyone who must read a datum and stumbles turns. This referent is, in the words of Tome 3, "*not a keeper who dispossesses, but a referent who makes one more autonomous*". This posture — helping, making autonomous, not dispossessing — runs through the whole framework, and culminates in competence C23.

Passing from One Degree to the Next

The passage is validated by peers, never by an external authority. A journeyman becomes a master when the community of masters recognizes them as such — on the basis of works exhibited, apprentices trained, arbitrations held. This recognition by peers is constitutive of the craft; without it, one has a certification, not a degree. It is also what *institutes the referent*: recognizing an artisan as master of a domain is designating whom to turn to.

The indicative time for each degree: one to two years to become an apprentice, three to five years to become a journeyman, ten years or more to become a master. These durations are orders of magnitude, not mechanical thresholds. What counts is the accumulation of works and tests, not the calendar.

Part II — Competences of the Apprentice (Reading)

Competence 1 — Reading the flow of the real behind the datum

Knowledge. The datum is not a pre-existing object; it is the result of an operation that constitutes it — on its observational route, a drawing made from a flow; elsewhere, an act that institutes it (a counted vote, a closed balance) or a calculation on other data (an average, an indicator). The flow of the real has its own dynamics (speed, scale, dimensions), which determine what a datum can or cannot mean.

Know-how. Faced with any data set, knowing how to formulate: *from what real phenomenon does this datum come? at what scale does this phenomenon unfold? at what speed does it change?*

Assessment criteria. The apprentice can name the flow of the real underlying any datum presented to them. They no longer confuse the datum with the thing it represents.

Model test. The apprentice is presented with a table of figures without context; they must reconstitute the flow of the real observed — what, where, on what time scale —, and identify what they cannot deduce from the datum alone.

Competence 2 — Recognizing a flow of observation

Knowledge. A flow of observation is a canal built by an intention, distinct from the flow of the real it observes. It has criteria, a cadence, a scope, a relative fidelity.

Know-how. Distinguishing an isolated drawing from a tended flow of observation. Faced with a flow of observation, understanding that it is a

construction, not a transparent window on the real.

Assessment criteria. The apprentice no longer treats any flow of observation as if it were neutral or exhaustive. They can put into words that every flow is built.

Model test. The apprentice is presented with a time series (weather entries, economic statistics, industrial measurements). They must list the construction choices that made this series possible — and that could have been different.

Competence 3 — Going back to the intention and the criteria

Knowledge. Every flow of observation is born of an intention, which translates into concrete criteria (what, at what cadence, with what fidelity, what corpus, what scope).

Know-how. Faced with a flow of observation, reconstituting by analysis the initial intention and the criteria that follow from it. Identifying *who* dug the canal and *for what purpose*.

Assessment criteria. The apprentice can put into words the upstream intention of any flow they examine, even when it is not explicitly documented.

Model test. The apprentice is presented with a data set produced by an institution (for example a census). They must identify the initial intention, the criteria that follow from it, and point out the blind spots that this intention produced.

Competence 4 — Judging relative fidelity

Knowledge. The fidelity of a flow of observation is relative to its criteria, never absolute. A flow is not “good” or “bad” in itself; it is suited or unsuited to a use.

Know-how. Faced with a flow of observation, not reproaching it for its limits but assessing whether its criteria suit the intended use.

Assessment criteria. The apprentice no longer confuses *fidelity* and *exhaustiveness*. They know that a narrow flow can be perfectly faithful to its use.

Model test. The apprentice is given a flow and two possible uses. They must determine whether the flow is suited to each of the uses, and argue on the criteria.

Competence 5 — Identifying the undrawn

Knowledge. Every database is defined as much by what it contains as by what it leaves out of frame. The undrawn is constitutive.

Know-how. Faced with any database, knowing how to ask: *what did one choose not to measure? which flows were not observed? who decided it and why?*

Assessment criteria. The apprentice systematically raises the question of the undrawn without being asked. They identify at least one zone of shadow in every data set examined.

Model test. The apprentice is presented with a published statistical study. They must produce a list of the parameters not collected, and indicate for each how its absence can affect the conclusions.

Competence 6 — Assessing freshness, distinguishing the three ages

Knowledge. A datum lives successively three ages: operational (fresh), statistical (ripening), memorial (archival). Its freshness determines its legitimate use.

Know-how. Estimating the time gap between a datum and the flow it comes from. Judging whether this gap is compatible with the intended use. Identifying the confusion of ages when it occurs.

Assessment criteria. The apprentice never processes a datum without having checked its date and estimated its functional age. They refuse to use an archival datum as if it represented the present.

Model test. The apprentice is presented with a case in which a decision was taken on the basis of a datum that was too old. They must identify the confusion of ages and propose the posture that would have avoided the error.

Competence 7 — Perceiving and distinguishing a datum

Knowledge. The reception of a datum is an act — the act of reading (Tome 3) — with the structure *perceive* → *distinguish* → *decipher*. This act never applies to the raw trace of the real, but to data already inscribed according to conventions. Its first two moments — perceiving that there is a datum there, distinguishing what it is from what it is not — precede and condition deciphering, which happens at a depth relative to the reader's corpus.

Know-how. Faced with a datum received, knowing how to make the elementary gestures of reading: spotting it as a datum (and not as noise or decoration), distinguishing it from its medium and from neighbouring data, situating what corpus its deciphering would require. Knowing how to recognize the limit of one's own deciphering without masking it.

Assessment criteria. The apprentice distinguishes perceiving, distinguishing and deciphering; they do not confuse "having a datum before one's eyes" and "having read it". They can name the corpus that deciphering would require, and say honestly how far they decipher.

Model test. The apprentice is presented with a datum inscribed in a convention they master poorly (technical notation, trade code, unusual unit). They must show that they perceive and distinguish the datum correctly, identify the corpus necessary for deciphering it, and situate the point at which they should call on a referent.

Competence 8 — Recognizing the mute datum and the dead datum

Knowledge. A datum can cease to be legible in two distinct ways (Tome 3). The **mute datum** is relative and reversible: it is not legible *here and now*, for want of the adequate corpus or reader, but it could be elsewhere or later. The **dead datum** is the universal loss of its interpretation — the *second death*: the key to reading is lost everywhere, the community that knew how to decipher has died out; the medium may subsist, but the datum falls back into trace. It is not a third death to be invented: it is the return to the status of trace that the first tome already set out.

Know-how. Faced with a datum illegible for its reader, knowing how to diagnose whether it is mute (reversible, to be reconnected to a corpus or a reader) or dead (interpretation universally lost). Not treating one as the other: the mute datum calls for a referent or a corpus; the dead datum calls for the lucid finding that only a trace remains.

Assessment criteria. The apprentice never declares a datum “illegible” without specifying which of the two situations they diagnose. They know that muteness is relative and death universal, and do not worsen the one into the other.

Model test. The apprentice is presented with two cases: a datum not interpreted for want of an accessible corpus (but one that can be reconstituted), and a datum whose every key to reading has disappeared. They must distinguish the mute from the dead, and propose for each the right posture.

Part III — Competences of the Journeyman (Building, Circulating, Tending)

Competence 9 — Reconstituting the necessary corpus

Knowledge. A datum alone means nothing; it requires a corpus to become interpretable (units, norms, references, metadata, other data of the same type).

Know-how. Identifying, for a given datum, the set of other data that give it meaning. Reconstituting this corpus when it is not explicitly present.

Assessment criteria. The journeyman never delivers a datum without its corpus. They identify the missing corpora in the flows they examine.

Model test. The journeyman is entrusted with a raw datum (“38.2”) and asked to make it interpretable. They must list the necessary corpus and reconstitute it as far as possible.

Competence 10 — Locating the observational optimum

Knowledge. For every flow of observation, there is an optimal point between under-drawing (loss of the signal) and over-engineering (waste). This optimum depends on context: the speed of the flow of the real observed, the fineness required by the use, the costs.

Know-how. For a given subject and use, determining the cadence, the precision and the corpus that place the flow of observation in an optimal situation.

Assessment criteria. The journeyman knows how to size a flow of observation without over-calibrating or under-calibrating it. They know how to justify their choices by the characteristics of the flow of the real observed.

Model test. The journeyman is given a brief (subject, use, constraints). They must produce the specification of a flow of observation at the optimum, justifying each parameter.

Competence 11 — Thinking the gesture of annotation

Knowledge. Every datum carries the mark of whoever annotated it — expert human, involuntary human, automatic sensor, algorithm. Each class of annotator has its own biases.

Know-how. Faced with any datum, knowing how to identify *who* annotated it, with what instrument, according to what grid, with what intention. Anticipating the biases proper to the class of annotator.

Assessment criteria. The journeyman processes no datum without having identified the provenance of its annotation. They know how to point out the associated structural biases.

Model test. The journeyman is presented with two data sets on the same phenomenon but coming from different classes of annotators (for example automatic sensors vs voluntary declarations). They must identify the respective biases and indicate which uses each supports.

Competence 12 — Distinguishing setting in motion from the relation to the present

Knowledge. The freshness of a flow of observation conditions its relation to the *current* real. It does not condition its capacity to be faithfully *replayed* as a representation of its time.

Know-how. Knowing whether an old flow can be used to replay the past (yes, under conditions) or to represent the present (no). Distinguishing these two uses.

Assessment criteria. The journeyman does not confuse a rich historical flow with a fresh flow; they know that the two do not serve the same question.

Model test. The journeyman is entrusted with one case in which one seeks to understand a past crisis and another in which one seeks to anticipate a present crisis. They must identify, for each case, which flows to call on and why.

Competence 13 — Recognizing the illusion of continuity

Knowledge. A flow of observation produces a functionally continuous representation of the real (by interpolation between drawings), but this continuity is illusory. Between two drawings, anything may have happened.

Know-how. Faced with a flow of observation, identifying the zones where continuity is assumed rather than captured. Estimating the risk of the brief event that slipped in between two points.

Assessment criteria. The journeyman never confuses the film with the world. They point out the zones where interpolation carries a risk.

Model test. The journeyman is entrusted with a flow of observation at a low cadence on a phenomenon with rapid variations. They must identify the potential artefacts (Nyquist effect) and propose the relevant cadence corrections.

Competence 14 — Identifying stable sources

Knowledge. Some fragments of the real have a lapse so slow that it can be treated, at the scale of use, as negligible (the grammar of a language, theorems, great physical regularities, well-established historical facts). Tome 2 specifies it: stability is not an intrinsic property but a *ratio of speeds* — the datum seems motionless because the real it observes flows slowly (“navigating in place”). These sources provide foundation ground on which to build lasting structures.

Know-how. Recognizing, among flows of observation, those that can be held to be stable at the scale of use. Distinguishing stable sources from sources of rapid lapse. Not confusing the two.

Assessment criteria. The journeyman does not ask of an unstable source the stability it cannot offer, nor ignore an available stable source. They know how to found a structure on the right ground, and reason in terms of a ratio of speeds rather than of absolute age.

Model test. The journeyman is entrusted with a long-term project. They must identify the stable sources on which they can build and the volatile sources that will have to be refreshed, specifying the tending strategy.

Competence 15 — Regulating the transport of a work

Knowledge. Putting a work into circulation is a gesture — the act of exchange (Tome 2), symmetrical to inscription. Transport is not the movement of a thing: it is a *relation between two movements*, that of the datum towards the reader and that of the reader towards the datum. It is accomplished only when *the reader's share is practicable*. Transporting a datum does not cede it like an object: it is shared like a fact; when transport copies it, it multiplies its occurrences, and the datum remains one. The transport medium comes in a minimal typology: moving, transmitting, making accessible.

Know-how. For a work to be delivered, choosing the suitable transport medium (moving / transmitting / making accessible) and regulating the delivery so that the reader's share is actually practicable — not merely setting the datum down somewhere. Anticipating what the recipient will have to be able to do for the relation to be accomplished.

Assessment criteria. The journeyman does not hold a work to be delivered by the mere fact that it has been set down. They check that the reader's share is practicable, and can say what, without it, would prevent transport from being accomplished.

Model test. The journeyman is entrusted with a consolidated datum and two distinct recipients. They must specify, for each, the transport medium and the conditions that make the reader's share practicable — and point out the case in which the work, badly transported, would remain inaccessible or mute for its recipient, without its value being realized.

Competence 16 — Judging the fidelity of movement

Knowledge. Transport is not neutral (Tome 2). It has properties: a *fidelity* (what it preserves or alters on the way), a *temporality* (movement takes time and can make what it carries go stale), a *multiplication* (the carriers of the transported datum multiply, through a duplication characterized along three axes). A work can be faithfully made and nevertheless degraded by its transport.

Know-how. Assessing what a given transport preserves, alters, delays or multiplies. Identifying the alterations introduced on the way, distinct from the original limits of the work. Taking the transport delay into account in the judgement of freshness.

Assessment criteria. The journeyman does not confuse a defect of making with a defect of transport. They can name what circulation has made a work undergo between its source and its reception.

Model test. The journeyman is presented with a datum that reached its recipient degraded or stale. They must determine whether the degradation comes from making or from transport (fidelity, temporality, multiplication), and propose the correction at the right point of the chain.

Competence 17 — Framing a reader's window

Knowledge. A work is made to be read by someone *situated* (Tome 3). Every reading is bounded by a window — perceptual (what the reader can perceive), attentional (what they can pay attention to), interpretive (what their corpus allows them to decipher). No reading is from nowhere: saying to whom a work is legible, and on what conditions, is part of the delivery.

Know-how. For a given work, identifying the window of the intended reader: who can read it, on what conditions, down to what depth of deciphering. Adjusting the form of the work to this window, without lowering it or making it inaccessible.

Assessment criteria. The journeyman does not deliver a work without having named its reader's window. They distinguish the three bounds (perceptual, attentional, interpretive) and know which one is at stake when a reading fails.

Model test. The journeyman is entrusted with one and the same consolidated datum and two audiences with very different windows (for example an expert of the domain and a non-specialist decision-maker). They must produce, for each, the form of delivery suited to their window, and justify the differences by the three bounds.

Part IV — Competences of the Master (Judging, Serving as Referent, Transmitting)

Competence 18 — Criticizing the relevance of the criteria

Knowledge. The fidelity of a flow of observation to its criteria is not the assurance of its relevance for a given use. A flow can be perfectly faithful to badly set criteria.

Know-how. Faced with a flow of observation, knowing how to ask: *are the criteria that defined this flow suited to the question I am asking?* This question is different from, and often harder than, the question of fidelity.

Assessment criteria. The master raises the question of the criteria before that of fidelity. They know how to diagnose a flow well made but badly set.

Model test. The master is entrusted with a flow of observation that is technically impeccable but unsuited to a requested use. They must produce the diagnosis and propose the reformulation of the criteria.

Competence 19 — Thinking the loop

Knowledge. When a flow of observation is used to decide and act on what it observes, it forms a closed circuit. Observation then ceases to be neutral: it engages the becoming of the real observed.

Know-how. Identifying the flows of observation inserted in loops. Measuring what the choice of criteria engages for the future of the real observed. Anticipating feedback effects.

Assessment criteria. The master never treats a decisional flow as if it were contemplative. They can name the loop effects that modify the real observed.

Model test. The master is presented with a system in which a datum feeds an automatic decision (for example a score that conditions a treatment). They must identify the loop effects, the biases induced by feedback, and propose a lucid posture.

Competence 20 — Anticipating the systemic leap

Knowledge. The improvement of the means by which a flow of observation is built can produce, beyond a threshold, a change of nature — not a mere gradual improvement. Cinema, automation, the immediacy of notifications: so many examples.

Know-how. Keeping the possibility of the leap in mind. Identifying the warning signs. Measuring the systemic implications when the leap occurs.

Assessment criteria. The master never treats a technical improvement as a mere improvement. They question the possible threshold.

Model test. The master is entrusted with a technical innovation being deployed. They must identify whether it belongs to gradual improvement or to the systemic leap, and derive the consequences for what it will really change.

Competence 21 — Understanding inter-flow dynamics

Knowledge. A flow of observation can be derived, transmitted, reprocessed by other entities according to their own criteria. The quality of a derived flow depends on the complete chain of upstream drawings. From the circulation of flows a distributed intelligence arises — on condition that the intentions that feed it are plural. Tome 2 extends this point: propagation is the aggregate of transports, and its racing feeds the torrent, whose engines are diagnosed through the extended chain.

Know-how. Mapping out the complete chain of a derived flow. Identifying the successive operators and their intentions. Assessing the overall reliability by going back to the source. Spotting the concentrations that impoverish the plurality of intentions.

Assessment criteria. The master never processes a derived flow without having reconstituted its chain. They identify the problematic concentrations (a single operator over the whole chain).

Model test. The master is presented with a composite indicator (for example an economic index). They must reconstitute the chain of upstream flows, identify the successive operators, point out the points of fragility.

Competence 22 — Recognizing the nature and age of the corpora that feed an AI model

Knowledge. Every training corpus is an assembly of flows of observation frozen at a given date. Flows differ by their rate of lapse; some models should be connected by access rather than trained on frozen corpora. The large language model is here an illustration — a dated one — of the systemic leap (Tome 1) and of automatic reading (Tome 3), not a concept in itself.

Know-how. Faced with any result produced by an AI system, knowing how to ask: *on which flows was this model trained? what is the freshness of the corpus? what intentions dug the canals it comes from? does the question asked concern a domain of slow or rapid lapse?*

Assessment criteria. The master treats no AI result as a raw truth. They systematically question the nature and age of the corpus.

Model test. The master is presented with the output of a generative AI model on a current-affairs question. They must diagnose the relevance of the corpus for this question, identify the zones where the model lies through staleness, and propose the right posture — training, access, or refusal of use.

Competence 23 — Holding the relation of referent and arbitrating the three paths

Knowledge. Tome 3 establishes the **referent** as a general category: anyone who, on the subject to which a datum refers, knows more than the reader who stumbles. It is a relative position, not an instituted function; it is what founds recourse. The data artisan is a particular case of it — the referent of the proper domain of the datum —, “*not a keeper who disposes, but a referent who makes one more autonomous*”. The same tome distinguishes **three paths**, three ways of not actualizing an arrived datum, which nevertheless remains constituted: **incapacity** (the reader does not know how to decipher — remediable by the referent, without forcing secrets); **disinterest** (the reader does not want to read — a matter of the reader’s posture); **rapid lapse** (the datum saw its validity window close before being read — the normal fate of many data, and not a failure). Not all unread data are failures.

Know-how. Holding, for one's domain, the relation of referent: reading what others stumble on, or making others capable of reading, without dispossessing them or forcing what must remain closed. Faced with an unread datum, diagnosing which of the three paths is at stake, and answering it rightly: remedying incapacity, working on disinterest through posture, accepting rapid lapse as a normal fate. Distinguishing what deserves to be read from what could legitimately remain unread.

Assessment criteria. The master does not treat every unread datum as a fault. They diagnose the path (incapacity / disinterest / rapid lapse) and adapt their answer. In the relation of referent, they make more autonomous and do not make themselves indispensable; they know how not to force secrets.

Model test. The master is presented with three data of their domain that remained unread, each belonging to a different path. They must make the diagnosis for each, propose the suitable answer, and show — on the case of incapacity — how they would make the reader more autonomous rather than dependent.

Part V — Assessment, Transmission, Revision

Assessment by Peers

No competence of this framework is validated by a written examination. All are validated by a **test of work**: the learner produces a work — a diagnosis, a built flow, a regulated delivery, an arbitration —, and a journeyman or a master judges its quality against the criteria. This assessment is public within the community: the works submitted can be consulted by peers, the judgements argued.

Assessment concerns the work and not the learner. An insufficient work does not disqualify the learner; it indicates what remains to be learned. The craft is built by the accumulation of successful works, not by the crossing of one-off thresholds.

Transmission

At each degree, the learner accompanies a higher degree. The apprentice accompanies a journeyman; the journeyman accompanies a master. This presence at the workpiece is constitutive of apprenticeship: one learns by watching it done, by doing under someone's gaze, by arbitrating together the difficulties encountered.

From the degree of journeyman, the artisan transmits in their turn: they accompany an apprentice. It is by transmitting that one consolidates one's own established results, and it is by training in one's turn that one becomes a master.

Revision of the Framework

This framework is not fixed. It lives with practice. Three mechanisms ensure its revision.

Feedback from works. The assessments of works that raise difficulties — those where the grid of competences is not enough to arbitrate — are passed up, examined by the masters, and lead to clarifying or amending the framework.

Regular reviews. At fixed intervals (for example annually), the masters meet to examine the state of the framework in the light of practice. Competences that have aged are reformulated; new competences that practice has brought out are added.

Changes in the field. When the field changes (new technologies, new uses, new types of flows), the framework must adjust without disowning its substance. What belongs to substance — the competences of reading, building, circulation, reception and judgement — does not change; what belongs to form — the model tests, the examples, the tools mentioned — is renewed.

Conclusion — A Framework of Works

This framework is neither a university programme nor a certification specification. It is an articulated description of what a data artisan knows how to do, at each of the degrees of their craft and along the three phases of the datum. Its function is threefold: offering the learner a horizon of progression; offering the trainer a guide for assessment; offering the community a point of arbitration in case of disagreement about what a competence is worth.

It will be what practice makes of it. Holding it as a sacred text will kill it; holding it as a living instrument will make it fruitful.

“The craft is what one learns by doing it — and what one teaches by having it done.”

Landmarks

For the conceptual foundation of the twenty-three competences listed, see the trilogy *Tried by the Flow*: Tome 1, *The River and the Canal*, doc 6 (*Digging the Canal*), for the competences of making (C1–C6, C9–C14, C18–C22); Tome 2, *From Spring to Torrent*, for the competences of circulation (C15, C16, and the extension of C14 and C21); Tome 3, *The Trace or the Datum*, for the competences of reception (C7, C8, C17, C23).

For the general status of the craft and its articulation by degrees, see the framing document *The Data Craft*.

For the exercises through which these competences are acquired, see *The Data Artisan's Apprenticeship Manual* (each exercise has the number of the corresponding competence, C1 to C23).

Framework, June 2026, to be tested by practice.

The Data Artisan's Workshop Book

Framing Document v1.0.0 — The Place, the Tools, the Rituals, the Productions

"The workshop is the place where one learns what one did not know one did not know."

— Contemporary saying

Preamble — Status of the Book

This document describes what a data artisan's workshop is: its place, its tools, its rituals, its productions. It extends the framing document *The Data Craft* by giving a material and organizational form to what the other documents deal with in terms of concept (the framing), of competences (the framework) or of teaching (the manual).

The workshop serves not only to *make*: it also serves to *circulate* works with fidelity and to *make them legible* to situated readers. Two concrete features follow from this, described here: a family of tools devoted to transport, and a ritual of reception review. The signature sheet, likewise, takes up the finished model given of it by the companion volume *The Canal and the Workshops* (Tool 3), with its fields for transport and reader's window.

An artisan without a workshop is not an artisan: they are a theorist of craft. The workshop is the place where the gesture is made, where the tool is held, where the work is shown, where the apprentice watches. Without this place, the craft remains verbal. With it, the craft takes on body.

This book is a frame, not a rulebook. Each real workshop will adapt it to its means, its context, its works. But some features are common to every artisan's workshop, whatever the craft — and it is these features that the present document wants to name.

Part I — The Place

The Workshop as a Threshold

A workshop is not a mere workspace. It is an **identified, distinct, separate place** — separated from the rest by a door, a threshold, a convention. One enters a workshop: one is not there by chance. This liminal character — entering, leaving — is part of the craft. It marks that one passes from one regime to another: outside, one consumes the datum; inside, one makes it.

This identification of the place is not an organizational detail. It is what allows concentration to unfold, the apprentice to watch without interruption, the master to keep the right gesture. The workshop without a threshold is an *open-plan office*: it is another type of place, but it is no longer a workshop.

The Physical Workshop

The ideal physical workshop of the data artisan can be described in a few features.

An **individual workspace** for each artisan, where they can put down their instruments, keep their works in progress, have access to their notebooks. This space is not an office: it is a workstation oriented by the gesture it hosts (reading screens, handling instruments, taking notes).

A **space for collective review**, where works are exhibited and discussed. This space allows transmission by example and assessment by peers. Its presence in the workshop is not optional: without a place of review, no transmission; without transmission, no craft.

A **library** — in the broad sense: reference works, archives of earlier flows, documentation of the past works of the workshop. The library is the memory of the workshop; it is what allows the craft to be transmitted over time and beyond individuals.

A **wall of the exhibited work**, where the significant works produced in the workshop are displayed — past ones as well as those in progress. This display plays three roles: it honours the work accomplished, it teaches by example, it offers points of reference for discussions about the craft well done.

The Virtual Workshop

Not all workshops can be physical. When the workshop is virtual — an on-line workspace, a shared platform —, it must reproduce the functions of the physical place, not only its tools. The virtual workshop has its threshold (a clearly identified access space), its individual space (personal zones of each artisan), its review space (a shared zone to exhibit and discuss

works), its library (organized archives), its wall of works (a gallery of reference productions).

The risk of the virtual workshop is to slide towards the mere shared tool — a storage platform, a collaborative folder. To remain a workshop, it must keep the liminal functions, the organization through rituals, the presence of exhibited works. It is harder than in a physical workshop, but it is not impossible.

The Workshop / Line Articulation in an Organization

In an organization, the workshop coexists with the industrial line for processing data. Both are necessary; they do not serve the same needs.

The **line** processes massively, at low cost, on standardized flows. It is efficient, indispensable, irreplaceable for routine volumes.

The **workshop** makes by hand, on the flows that deserve it. It is slow, costly, irreplaceable for the works that require a signed quality — those that guide high-stake decisions, those meant to last, those whose traceability matters, those that must be made legible to a precise recipient.

The passage from one to the other happens by explicit decision. When a question justifies it, the line *passes the job to the workshop* — which takes charge of the flow, digs it at the optimum, signs the work, regulates its transport, and gives it back. This articulation is one of the organizational innovations that the data craft introduces.

Part II — The Tools

The tool is not a detail. A bad tool degrades the gesture, whatever the hand that holds it. And a well-made tool, transmitted with care, carries part of the know-how that presided over its design. The artisan chooses their tools with discernment, keeps several for different uses, and transmits their handling to their apprentices.

The tools of the data artisan fall into six families, which follow the three phases of the datum: drawing and annotation for making; fixation and transport for preservation and circulation; reading for reception; maintenance for tending over time.

Drawing Tools

These are the instruments that materialize the act of inscription on its observational route. Physical sensors, collection forms, extraction scripts, apparatuses of direct observation. Each drawing tool carries an intention: it was designed to capture a particular type of phenomenon, with a particular fidelity, at a particular cadence.

The artisan is not content to use standard drawing tools. They know how to *check their calibration, know their biases, build specific ones when the use requires it*. A serious workshop has a documented inventory of its drawing tools, with their characteristics and their limitations.

Annotation Tools

These are the grids, classifications, protocols that transform a signal into a datum. An annotation grid is never neutral: it imposes its categories on the flow of the real, which of itself contains none.

The artisan builds their grids with care. They know what the grids include and what they exclude. They know when to borrow an existing grid (because it is proven, shared, comparable to others) and when to build a new one (because the use requires distinctions that exist nowhere else). The workshop keeps its grids in its library, with their history and the works they made possible.

Fixation Tools

These are the media on which the drawn and annotated datum is preserved. File formats, databases, registers, archives. The medium is never innocent: it has its own lifespan, its constraints of rereading, its technical dependencies.

The artisan chooses their medium according to the expected duration of use, the constraints of sharing, the risks of obsolescence of the medium itself. They document the format chosen so that the following generations can still read what they wrote. A responsible workshop does not fix in a format whose durability it does not master — otherwise its work risks the dead datum, the universal loss of the key to reading.

Transport Tools

These are the devices that put a work into circulation — that serve the act of exchange. Tome 2 gives their minimal typology: *moving* (carrying the datum from one place to another), *transmitting* (passing it to a designated recipient), *making accessible* (making it available to whoever will come). Distribution networks, exchange protocols, portals for making available, sharing devices: each serves one of these three modes.

The artisan knows that transport is not neutral. They choose the medium according to what the recipient will have to be able to do for *the reader's share to be practicable* — for a work set down in a medium that its recipient cannot open is not transported: it remains mute for them. They know the alterations that transport can introduce (loss of units, of metadata, of context) and prevent them. A serious workshop documents, for each type of work, the proven mode of transport and its conditions of reception.

Reading Tools

These are the instruments that make it possible to read, query, visualize the recorded flows of observation. Visualization software, structured queries, cross-referencing methods, descriptive statistics.

The artisan knows that these tools transform what they give to be read. A visualization chooses its axes, its scales, its aggregations; it can bring out real trends or suggest false ones. The artisan knows the biases of their reading tools as they know the biases of their drawing tools, and they inform their readers of them. They also know that these tools serve an act — perceiving, distinguishing, deciphering — whose depth depends on the corpus of the one who handles them.

Maintenance Tools

These are the devices that make it possible to keep up a flow of observation over time: alerts on calibration drift, freshness indicators, apparatuses for periodic re-drawing, upstream-downstream consistency checks.

These tools are often neglected — a flow of observation is designed, deployed, then left to itself. The artisan knows that this neglect degrades works. They integrate maintenance into design, size the monitoring tools from the outset, and plan regular reviews.

Part III — The Rituals

A workshop lives through its rituals. These are not ceremonies; they are regular, articulated moments in which transmissions, arbitrations and judgements take place. Without rituals, the workshop drifts towards the juxtaposition of individuals working in parallel; with them, it becomes a community of practice.

The Canal Review

At regular intervals (monthly, quarterly as the case may be), each flow of observation tended by the workshop is reviewed. What drawings took place? Is the canal at the optimum? Is there a calibration drift? Is the corpus still sufficient? Is the use of the flow still relevant?

This review is not a check; it is a care. The artisan who tends a canal reviews it regularly, like the carpenter who reviews their roof frame, like the glassmaker who goes back to their pieces. It is this care that distinguishes the living canal from the abandoned canal.

The Reception Review

At regular intervals, the workshop checks that its works actually reach their readers in legible form. Were the works delivered received? Was their reader's share practicable? Did they arrive within the validity window, or go stale on the way? Are there works that, for want of being read, remained not actualized — and if so, by which of the three paths: incapacity of the recipient (the work is mute for them), disinterest (it is neglected), rapid lapse?

This ritual is the counterpart, on the side of reception, of the canal review. It keeps the workshop from the illusion that a work delivered is a work arrived. When a work has not been read through incapacity, the workshop asks itself how, as referent, to make the recipient more autonomous. When it is through rapid lapse, it takes note without seeing a failure in it: not all unread data are faults.

The Signature

On the delivery of a work — whether a built flow of observation, a consolidated datum, a diagnosis —, the artisan **signs**. The signature is placed at the head of every delivery. It contains at least the following fields, in the sheet model proven by the community:

WORK SIGNATURE

- Artisan: [name]
- Delivery date: [date]
- Type of work:
 - *Tended flow of observation*
 - *Consolidated datum*
 - *Diagnosis*
- Question of use: [short sentence]
- Main criteria:
 - *Scope*: [...]
 - *Cadence*: [...]
 - *Intended fidelity*: [...]
 - *Corpus used*: [...]
- Observational optimum: [justification of the arbitration]
- Transport / fidelity expected at reception: [what the recipient must be able to do for the reader's share to be practicable; possible alterations on the way]
- Intended reader's window: [to whom it is legible, on what conditions]
- Known limits: [...]
- Estimated validity: [...]
- Conditions of maintenance / re-drawing: [...]

Two fields of this model deserve attention. *Transport / fidelity expected at reception* anchors the signature in the second tome: transport is a relation between two movements, and signing a work is making the reader's share practicable — not merely setting the datum down somewhere. *Intended*

reader's window anchors it in the third: a work is made to be read by someone situated, and saying so is part of the delivery.

The signature is not a vanity. It is an act of responsibility: the artisan declares that they answer for the work delivered. It is also an act of transparency towards the user: the signature allows them to judge what they are relying on and what they will have to be able to do to read it. And it is an act of transmission: the signature is archived with the work, and feeds the memory of the workshop.

Transmission

At regular intervals, the journeyman presents to the apprentice a work in progress and explains the gesture to them. At regular intervals, the master presents to a journeyman the diagnosis of a complex situation and asks for their arbitration. These moments of transmission are not left to improvisation: they are foreseen, planned, expected.

The serious workshop devotes at least one hour each week to explicit transmission — not as a course, but as a sharing in front of the work. It is in these moments that the subtlest part of the craft — the part that cannot be put into words in a framework — is transmitted from hand to hand.

Collective Arbitration

When a difficult question arises — a flow whose criteria are contested, a decision whose use raises a problem, a case that no one has ever dealt with —, the workshop meets to arbitrate. Positions are presented, arguments exchanged, a decision is taken, reasoned, archived.

These arbitrations gradually constitute the case law of the workshop. They are not binding on other workshops, but they can be consulted, and they feed the wider community. A workshop that does not arbitrate — that is content to produce — is not building its craft; it is repeating.

Part IV — The Productions

The workshop produces. Five types of productions deserve to be named.

The Tended Flow of Observation

This is the main work of the workshop. A canal dug, sized at the optimum, signed, maintained over time. It feeds an explicit use; it is documented by its signature sheet (origin, criteria, maintenance calendar, limits, transport and reader's window). It can be consulted by users according to the agreed terms.

The Consolidated Datum

This is the synthetic output of the flow of observation. An average, an indicator, a status, an equation, a diagnosis — what answers the question of use. The consolidated datum carries its context with it: the period it covers, the conditions of measurement, the margin of uncertainty, the limits of inference, and the reader's window for which it is intended.

The Canal Report

At regular intervals (at least annually), the workshop produces a report for each canal it tends: what was drawn, what was observed, what was learned, what was modified. This report is intended for the user of the canal and for the memory of the workshop; it is part of the craft well done.

The Artisan's Notebook

Each artisan keeps their **notebook** — physical or virtual — in which they record their observations, their doubts, their arbitrations, their learning. This notebook is not a private diary: it is a working instrument. It allows the artisan to reread themselves over time, to measure their progress, to go back to the reasons for a past decision. And it becomes, when the time comes, a resource for transmission to apprentices.

Reference Works

Some productions of the workshop acquire a particular status: they become reference works, exhibited on the wall, cited in the community, used as textbook cases for training. These works are not necessarily the most complex nor the largest. They are those that *exemplify* the craft well done — through their clarity, their relevance, their honesty about their limits.

Identifying reference works is part of the care the workshop gives to its memory. Without reference works, the craft has no examples; without examples, it has only texts, and texts alone do not form an artisan.

Conclusion — The Place Where the Datum Is Made

The workshop is, for the data craft, what the forge is to the blacksmith: not a logistical detail but a condition of existence of the craft. It is in the workshop that the gesture unfolds, that the tool is held, that the work is shown and signed, that its transport is regulated and its reception checked, that the apprentice watches, that the master transmits.

Building a workshop — physical or virtual — is no simpler than building the framework of competences. But it is just as indispensable. Without a workshop, the competences remain abstract; without competences, the

workshop is empty. The two are built together, and each, by its presence, supports the other.

This book has set out their common features. It is for each real workshop to make its own version of them, in its context, with its means, around its works. And to share, with the other workshops of the community, what it will have learned by doing — so that, little by little, through the accumulation of experiences, the stable form that this place will take emerges.

“One does not learn to forge by reading; one learns to forge at the forge.”

Landmarks

For the general status of the craft and its articulation by degrees, see the framing document *The Data Craft*.

For the competences that the workshop serves to acquire and exercise, see the *Competency Framework of the Data Artisan*.

For the exercises done in the workshop, see *The Data Artisan’s Apprenticeship Manual*.

For the complete model of the signature sheet and the other operational tools (checklist of the encountered flow, lapse grid, canal review), see the companion volume *The Canal and the Workshops — From Processual Ontology to the Gestures of the Craft*, Part V (“Toolbox”), whose model the signature sheet of this book takes up. For their conceptual foundation: Tome 2 (transport, act of exchange, typology of media) and Tome 3 (act of reading, reader’s window, the mute datum and the dead datum, three paths).

On historical craft workshops, in addition to the references already mentioned in the framing: the *Bauhütten* of the German Middle Ages offer a particularly complete model of articulation between place, transmission and work. On the French compagnonnage, the writings of Agricola Perdiguer (*Livre du Compagnonnage*, 1839) remain a reference on the community dimension of the workshop.

Book, June 2026, to be tested by practice.

The Data Artisan's Apprenticeship Manual

Framing Document v1.0.0 — Progressive Exercises on Real Flows, in the Three Phases of the Datum

"The apprentice watches; the journeyman does; the master teaches. And each, in turn, becomes an apprentice again."

— Contemporary saying

Preamble — Status of the Manual

This document proposes an itinerary of exercises for acquiring, through practice, the twenty-three competences detailed in the *Competency Framework of the Data Artisan*. It extends the framing document *The Data Craft* by giving a teaching form to what the other documents deal with in terms of concept (the framing), of competences (the framework) or of organization (the workshop book).

It covers the **three phases of the datum** — making, circulation, reception — in twenty-three exercises, one per competence, numbered continuously (E1 to E23) following the framework (C1 to C23).

A craft manual is not a school textbook. It is not read to pass an examination; it is worked through to acquire a gesture. The exercises it proposes are worth something only when carried out, under the gaze of a journeyman or a master, and discussed afterwards. Any exercise done alone, without feedback, misses half of its usefulness.

The present manual prescribes neither a calendar nor a speed. Each apprentice progresses at their own rhythm, according to their earlier experiences and the works they encounter. Progression is not linear: one can hold an advanced competence before having solidly acquired a more

elementary one, and one must then go back. That is normal; it is even expected.

Part I — Teaching Principles

Four Irreducible Principles

Learning by doing. No exercise is solved by reading. All require the apprentice to *do* — to handle a datum, examine a flow, build a canal, regulate a delivery. Writing a report is not an exercise of work on its own; it follows the exercise and fixes it.

On real flows. Simulated exercises (data sets made up for the occasion) are allowed for the first exercises, the time to discover the mechanics. After that, the apprentice works on real flows — from their workshop, their organization, public portals. The real has rough edges that simulation does not have; it is in these rough edges that the craft is forged.

With feedback from a journeyman or a master. Each exercise receives feedback, within a reasonable time, from a higher degree. This feedback is argued: it says what is right, what is insufficient, what is plainly wrong. It avoids overall judgements (“it’s good”, “it’s bad”) and replaces them with precise analyses. Without this feedback, the apprentice repeats their biases.

With a written reflection. After each exercise, the apprentice records in their notebook what they have learned: what they tried, what worked, what got stuck, what they understood afterwards. This notebook is the primary instrument of maturation: it allows the apprentice to reread themselves, to find again the way travelled, to identify their progress and their sticking points.

Progression by Degrees and by Phases

The manual follows the progression of the framework: eight exercises for the degree of apprentice (E1–E8), nine for the degree of journeyman (E9–E17), six for the degree of master (E18–E23). Within each degree, the exercises follow the order of the three phases of the datum. But this structure is only indicative. The same exercise can be taken up again at a higher degree on a more complex flow; and an experienced journeyman can come back to an apprentice exercise to have a younger apprentice work on it — transmission is one of the modes of deepening.

How to Read Each Exercise

Each exercise is presented in five sections: the **target competence** (with its number in the framework), the **context** (what type of flow it concerns),

the **instruction** (what must be done), the **feedback criteria** (what the journeyman or the master will examine), and the **learning trace** (what must remain of it in the notebook).

Part II — Exercises of Degree 1 (Apprentice)

Exercise 1 — From the Figure to the Flow

Target competence. C1 — Reading the flow of the real behind the datum.

Context. A table of figures retrieved without its context (for example: three anonymous columns of whole numbers, about a hundred rows, with no header or title).

Instruction. In twenty minutes, formulate in writing: (1) What real phenomenon can this table reasonably represent? (2) On what time scale? On what spatial scale? (3) What can one not deduce with certainty from this table alone? The apprentice may propose several hypotheses, but must rank them by likelihood.

Feedback criteria. The feedback examines whether the apprentice was able to name a phenomenon consistent with the figures, whether they were able to situate this phenomenon on a plausible spatio-temporal scale, and — above all — whether they were able to list what remains undetermined. An apprentice who proposes a single hypothesis as certain is called back to caution; an apprentice who multiplies hypotheses without ranking them is called back to rigour.

Learning trace. The apprentice records in their notebook: *“behind a figure, there is always a phenomenon, and I must learn to see it before seeing the figure”*.

Exercise 2 — The Flow behind the Series

Target competence. C2 — Recognizing a flow of observation.

Context. A well-documented time series (for example a series of public weather entries over ten years).

Instruction. Identify all the elements that make this series a built *flow of observation*, and not a transparent window on the real: who decided on the parameter observed, at what cadence, with what instrument, over what geographical scope, with what criteria of inclusion. For each choice, indicate how a different choice would have produced a different series.

Feedback criteria. The feedback examines whether the apprentice identified the main construction choices (six to ten depending on the case), and

whether they were able to sketch for each a credible alternative. An apprentice who takes the series for granted and identifies no choice misses the competence.

Learning trace. *“Every flow of observation is a construction. Faced with it, I do not have the real — I have what humans decided to capture of it.”*

Exercise 3 — The Upstream Intention

Target competence. C3 — Going back to the intention and the criteria.

Context. A widely circulated public indicator (for example a poverty index, an air quality indicator, an evaluation score).

Instruction. Reconstitute by analysis the initial intention that motivated the creation of this indicator. Identify the criteria that follow from it. Point out the blind spots that this intention has produced.

Feedback criteria. The feedback examines whether the apprentice was able to name a plausible and historically documented intention, whether they were able to break this intention down into concrete criteria, and whether they were able to point out at least two significant blind spots. An apprentice who rewrites the official intention without critical distance stays on the surface.

Learning trace. *“No indicator is neutral. It was intended, by someone, for something. And what it does not see speaks as much as what it sees.”*

Exercise 4 — The Right Use of the Flow

Target competence. C4 — Judging relative fidelity.

Context. One and the same flow of observation, and two possible uses (for example: hourly attendance data for a museum, used either to adjust the payroll, or to evaluate the impact of an exhibition).

Instruction. For each of the two uses, determine whether the flow is suited. Argue in terms of criteria: is the cadence compatible? Is the precision sufficient? Is the corpus relevant? Conclude by indicating, for each use, what would possibly have to be completed.

Feedback criteria. The feedback examines whether the apprentice was able to assess fidelity *relative to the use*, and not in the absolute. An apprentice who declares the flow “good” or “bad” without relating it to a specific use misses the gesture of relative judgement.

Learning trace. *“A flow is never good or bad in itself. It is suited or unsuited to a use.”*

Exercise 5 — The Invisible

Target competence. C5 — Identifying the undrawn.

Context. A published statistical study, documented well enough for its methodology to be accessible (for example a national survey on a social issue).

Instruction. Produce an argued list of the parameters not collected or of the populations not surveyed. For each omission, explain how its absence can affect the conclusions presented.

Feedback criteria. The feedback examines whether the apprentice identified at least three significant omissions, and whether they were able to measure the reach of each. An apprentice who is content with trivial omissions (“the telephone number was not asked”) is not yet at the level; an apprentice who identifies a structuring omission (“the population concerned by this policy was not surveyed”) has made the leap.

Learning trace. *“Faced with any database, I must learn to ask: what is not in it?”*

Exercise 6 — Functional Age

Target competence. C6 — Assessing freshness, distinguishing the three ages.

Context. Three recent data sets relating to the same type of phenomenon but at different dates (for example: three censuses ten years apart, or three attendance surveys).

Instruction. For each of the three sets, determine which age it is in: operational (usable for the present), statistical (usable as a historical corpus), memorial (usable only as testimony of the past). Justify with reference to the phenomenon observed and its speed of variation.

Feedback criteria. The feedback examines whether the apprentice was able to justify their classification with reference to the speed of the flow of the real observed. An apprentice who applies a mechanical criterion (“more than five years = archive”) without relating it to the speed of the phenomenon misses the competence; an apprentice who distinguishes, for example, demographic data (slow speed) from mobility data (fast speed) has grasped the gesture.

Learning trace. *“The age of a datum is not in the years that have passed. It is in the distance travelled by the flow it represented.”*

Exercise 7 — Perceiving, Distinguishing, Deciphering

Target competence. C7 — Perceiving and distinguishing a datum.

Context. A datum inscribed in a convention the apprentice masters poorly (for example a technical notation from another trade, an administrative code, an unusual unit, a datum in a specialized language or format).

Instruction. Break down one's own act of reading into three moments. (1) *Perceive*: what is there, what is datum and what is medium or decoration? (2) *Distinguish*: what is this datum, what is it not, how does it separate from its neighbours? (3) *Decipher*: how far does the apprentice decipher with their current corpus, and where do they stumble? Indicate what corpus would make it possible to go further, and which referent one would turn to.

Feedback criteria. The feedback examines whether the apprentice clearly distinguishes the three moments of the act of reading, and above all whether they can recognize honestly the limit of their own deciphering without masking it or overplaying it. An apprentice who claims to decipher everything, or who gives up at "perceiving", misses the gesture. An apprentice who can say "*I perceive and I distinguish, but to decipher this I would need such a corpus, or such a referent*" has grasped the competence.

Learning trace. "*Having a datum before one's eyes is not having read it. Reading is perceiving, distinguishing, then deciphering — and no one deciphers everything.*"

Exercise 8 — Mute or Dead?

Target competence. C8 — Recognizing the mute datum and the dead datum.

Context. Two uninterpreted data: the first remains decipherable in principle but the apprentice does not have, here and now, the corpus or the reader that would be needed (for example an entry in a nomenclature that a specialist would know how to read); the second has lost every known key to reading (for example a notation whose convention and the community that mastered it have disappeared).

Instruction. For each, diagnose: *mute* datum (relative, reversible) or *dead* datum (interpretation universally lost, falling back into trace — the second death)? Justify the diagnosis, and propose for each the right posture: for the mute datum, through which corpus or which referent to reconnect it; for the dead datum, the lucid finding that only a trace on a medium remains.

Feedback criteria. The feedback examines whether the apprentice does not confuse the reversible and the universal — whether they do not bury a datum that is only mute, nor raise hopes of resurrecting a dead datum. An apprentice who speaks of "illegibility" without deciding between the two misses the distinction.

Learning trace. "*Muteness is relative and can be recovered; the death of the datum is universal and cannot be recovered. Do not confuse the one with the other.*"

Part III — Exercises of Degree 2 (Journeyman)

Exercise 9 — The Corpus Restored

Target competence. C9 — Reconstituting the necessary corpus.

Context. An isolated datum presented out of context (for example a figure cited in a press article without a detailed source).

Instruction. Reconstitute the set of other data that would make this figure interpretable: unit, reference, period, population, method of measurement, comparables. Actively look for these elements by cross-checking public sources. When an element cannot be found, point it out explicitly.

Feedback criteria. The feedback examines whether the journeyman was able to name all the necessary elements (at least six for a numerical datum), and whether they were able to distinguish what they found from what they did not find. A journeyman who delivers an interpretation without a reconstituted corpus falls back to the level of apprentice.

Learning trace. *“A datum alone means nothing. I must learn to give it back its corpus.”*

Exercise 10 — The Canal at the Right Calibre

Target competence. C10 — Locating the observational optimum.

Context. An observation need to be designed (for example: “the municipality wants to follow attendance at its new park”).

Instruction. Produce the specification of a flow of observation at the optimum: what to draw, at what cadence, with what instruments, over what scope, with what corpus. Argue each parameter: why this cadence and not another, why this scope and not another. Identify explicitly the thresholds of under-drawing (below which the signal is lost) and of over-engineering (beyond which cost exceeds benefit).

Feedback criteria. The feedback examines whether the journeyman was able to produce a specification that *holds* — that is, that could actually be implemented — and that *justifies* each parameter. A journeyman who proposes an over-calibrated specification (“we capture everything just in case”) or an under-calibrated one has not grasped the optimum.

Learning trace. *“Doing well is doing right — neither more nor less.”*

Exercise 11 — The Provenance of the Annotation

Target competence. C11 — Thinking the gesture of annotation.

Context. Two data sets relating to the same phenomenon but coming from different classes of annotators (for example: attendance at an event,

measured on one side by automatic counters at the entrance, on the other by voluntary declarations of the participants).

Instruction. For each set, identify the class of annotator, its structural biases, its strengths. Indicate which use each supports better than the other. If possible, propose a cross-checking strategy that makes use of both.

Feedback criteria. The feedback examines whether the journeyman was able to name precisely the biases proper to each class (the automatic counter misses non-standard entries; voluntary declarations are biased by who answers). A journeyman who favours one because it “seems more objective” misses the point: no annotator is objective; each has its own biases.

Learning trace. *“Every datum carries the mark of whoever made it. And each hand has its flaw.”*

Exercise 12 — The Replayed and the Present

Target competence. C12 — Distinguishing setting in motion from the relation to the present.

Context. Two questions asked of the same historical corpus (for example a medical corpus over ten years): the first concerns the past (“how did a given pathology evolve over the decade?”), the second on the present (“what is the current incidence of a given pathology?”).

Instruction. Indicate, for each question, to what extent the corpus makes it possible to answer it. Identify the biases proper to each use. For the question on the present, indicate what would have to be re-drawn to answer faithfully.

Feedback criteria. The feedback examines whether the journeyman clearly distinguishes the two uses, and whether they identify for the second the need for a re-drawing. A journeyman who answers the question on the present by extrapolating from the past without saying so misses the gesture of distinction.

Learning trace. *“The same corpus can serve two questions, but not with the same guarantee. The past, it restores; the present, it can only suppose.”*

Exercise 13 — The Nyquist Threshold in Practice

Target competence. C13 — Recognizing the illusion of continuity.

Context. A flow of observation at a low cadence on a phenomenon with rapid variations (for example an industrial temperature sensor that draws every hour, whereas the process can vary in minutes).

Instruction. Identify the potential artefacts that the low cadence can produce — brief events not captured, false signals through interpolation, apparent oscillations that do not exist. Propose a corrected drawing cadence, justifying it by the characteristics of the phenomenon.

Feedback criteria. The feedback examines whether the journeyman identified at least one specific artefact and whether they proposed an argued corrected cadence. A journeyman who simply says “we need to draw more often” without specifying or justifying remains insufficient.

Learning trace. *“The film is not the world. And a film with a bad cadence invents movements that do not exist.”*

Exercise 14 — Foundations in the Ground

Target competence. C14 — Identifying stable sources.

Context. A long-term project to be designed (for example: “our organization wants to build a five-year knowledge strategy”).

Instruction. Identify the stable sources on which the project can build (slow lapse, validity tenable at the scale of use) and the volatile sources that will have to be refreshed (rapid lapse, requiring tending). For each source, indicate the associated tending strategy. Reason in terms of a ratio of speeds (the datum is stable because the real it observes flows slowly), not of absolute age.

Feedback criteria. The feedback examines whether the journeyman was able to distinguish clearly the two types and adapt the strategy to each. A journeyman who treats all sources in the same way (all to be tended, or all to be frozen) has not grasped the distinction.

Learning trace. *“On what ground to build, on what ground to refresh: that is the question that opens every long-lasting project.”*

Exercise 15 — The Reader’s Share

Target competence. C15 — Regulating the transport of a work.

Context. A consolidated datum ready to be delivered (for example an indicator produced by the workshop) and two distinct recipients whose means of access differ (for example an internal service that has the workshop’s tools, and an external partner that does not).

Instruction. For each recipient, choose the transport medium in the minimal typology — *moving, transmitting, making accessible* — and regulate the delivery so that *the reader’s share is practicable*: what the recipient will actually have to be able to do for the datum to reach them in legible form. Identify, for each case, what — without this regulation — would prevent transport from being accomplished and would leave the work inaccessible or mute for the recipient, not actualized.

Feedback criteria. The feedback examines whether the journeyman treats transport as a *relation between two movements* and not as a mere deposit. A journeyman who “sends the file” without questioning the reader’s share misses the competence; a journeyman who specifies what the recipient must be able to do, and adapts the medium accordingly, has grasped it.

Learning trace. *“Delivering is not depositing. A work is transported only when the reader’s share is practicable — otherwise it has not arrived.”*

Exercise 16 — What the Way Alters

Target competence. C16 — Judging the fidelity of movement.

Context. An arrived datum, received by its recipient in a degraded or stale state (for example an indicator whose units got lost on the way, or a datum fresh at the origin but arrived after its validity window closed).

Instruction. Determine whether the degradation comes from *making* (the work was already limited at the source) or from *transport* (fidelity altered on the way, temporality that made the datum go stale, multiplication that introduced divergences between copies). Locate precisely the point of the chain where the defect appeared, and propose the correction at the right place.

Feedback criteria. The feedback examines whether the journeyman does not confuse a defect of making with a defect of transport, and whether they can name which of the properties of movement (fidelity, temporality, multiplication) is at issue. A journeyman who “corrects at the source” a problem born of transport, or the reverse, misses the diagnosis.

Learning trace. *“Transport is not neutral. A work can be well made and badly arrived — and these two ills are not repaired in the same place.”*

Exercise 17 — Two Windows, One Datum

Target competence. C17 — Framing a reader’s window.

Context. One and the same consolidated datum and two audiences with very different reading windows (for example an expert of the domain and a non-specialist decision-maker, or an informed adult audience and a school audience).

Instruction. For each audience, produce the form of delivery suited to its window. Identify explicitly which of the three bounds — *perceptual*, *attentional*, *interpretive* — governs the adaptation in each case. Adapt without lowering (not mutilating the datum) or making inaccessible (not delivering it in a form illegible for the intended window).

Feedback criteria. The feedback examines whether the journeyman names the window of each reader and distinguishes the three bounds, and whether they know which one would be at stake if a reading failed.

A journeyman who delivers the same form to both audiences, or who “simplifies” one to the point of distorting the datum, misses the gesture.

Learning trace. *“No reading is from nowhere. A work is made for a window, and saying which is part of the delivery.”*

Part IV — Exercises of Degree 3 (Master)

Exercise 18 — Diagnosing Badly Set Criteria

Target competence. C18 — Criticizing the relevance of the criteria.

Context. A flow of observation that is technically impeccable (regular cadence, calibrated instruments, documented corpus) but whose use produces questionable results (for example a scoring system that unfairly penalizes certain situations).

Instruction. Produce a diagnosis: do the criteria that defined this flow suit the use made of it? What reformulations would be necessary? What would have to be drawn in addition, drawn less, drawn otherwise?

Feedback criteria. The feedback examines whether the master was able to distinguish the technical quality of the flow (which may be impeccable) from the relevance of its criteria (which may be insufficient). And whether they were able to propose an argued reformulation. A master who is content to condemn the flow without diagnosing its criteria remains at the level of journeyman.

Learning trace. *“A well-made flow can be ill-posed. Distinguishing the two is one of the most delicate gestures of the craft.”*

Exercise 19 — The Loop Recognized

Target competence. C19 — Thinking the loop.

Context. A system in which a datum feeds an automatic decision that modifies the real observed (for example a score that conditions a medical treatment, a recommendation algorithm that modifies the behaviours it observes, a predictive policing device that orients the patrols that then produce the data of the model).

Instruction. Identify the closed circuit. Measure what the initial choice of criteria engages for the future of the real observed. Anticipate the feedback effects. Propose a lucid posture: should the system be maintained, interrupted, redesigned?

Feedback criteria. The feedback examines whether the master was able to name the loop effects, anticipate their medium-term effects, and propose a posture that is neither naive (carrying on as if the loop did not exist) nor paralysing (interrupting everything without an alternative). A

master who is content to point out the loop without proposing a posture misses the dimension of judgement.

Learning trace. *“When observation decides, it no longer only describes the real — it makes it. It is a responsibility that must be taken on in full lucidity.”*

Exercise 20 — The Leap Anticipated

Target competence. C20 — Anticipating the systemic leap.

Context. A technical innovation being deployed (for example: a new instrument that multiplies by a thousand the drawing cadence in a given domain; or a protocol that makes interoperable canals that were until then isolated).

Instruction. Identify whether this innovation belongs to gradual improvement or to the systemic leap. If there is a leap, anticipate what it makes possible and which did not exist before, and what it makes obsolete and which seemed established. Propose a posture for preparing for it.

Feedback criteria. The feedback examines whether the master was able to make the diagnosis *leap vs improvement*, and derive the consequences for what will or will not change. A master who underestimates an authentic leap (“it is only an improvement”) or who overrates a gradual improvement (“it is a revolution”) misses discernment.

Learning trace. *“Not every improvement is of equal worth. Some transform the craft. And the right moment to prepare for them is before they arrive.”*

Exercise 21 — The Chain Traced Back

Target competence. C21 — Understanding inter-flow dynamics.

Context. A widely used composite indicator (for example a national economic index, an environmental score, an institutional ranking).

Instruction. Reconstitute the complete chain of upstream flows that feed this indicator. Identify the successive operators and their intentions. Point out the points of fragility: excessive concentrations (a single supplier for the whole chain), absences of redundancy, undocumented dependencies. Appreciate whether the plurality of intentions that feed the chain is sufficient, or whether propagation impoverishes itself by concentrating.

Feedback criteria. The feedback examines whether the master was able to go back up the chain over at least three storeys, and whether they identified at least one significant fragility. A master who takes the indicator as a fact without reconstituting the chain misses the competence.

Learning trace. *“No indicator suffices on its own. It lives from the chain that carries it. And this chain, I must know how to read.”*

Exercise 22 — The Corpus Questioned

Target competence. C22 — Recognizing the nature and age of the corpora that feed an AI model.

Context. A current-affairs question (a recent event, an ongoing debate, an evolving situation) put to a generative AI system whose training cut-off date is known.

Instruction. Diagnose the relevance of the corpus for this question. Identify the zones where the model lies through staleness (it renders with assurance a state of the world that no longer exists). Identify the zones where it remains valid (stable sources, historical context). Propose the right posture: refusal of use, recourse to live access, cross-checking with other sources.

Feedback criteria. The feedback examines whether the master was able to distinguish the stable elements (where the model remains valid) from the volatile elements (where it is stale), and whether they were able to propose a posture suited to the nature of the question. A master who takes the output of the model literally, or who rejects it wholesale without diagnosis, misses the competence.

Learning trace. *“An AI model is a frozen corpus. The question is not whether it is right, but about what it is right — and up to what date.”*

Exercise 23 — The Referent and the Three Paths

Target competence. C23 — Holding the relation of referent and arbitrating the three paths.

Context. Three data of the master’s domain, remaining unread, each belonging to a different path: the first because a reader stumbled for want of knowing how to decipher it (*incapacity*); the second because no one wanted to read it (*disinterest*); the third because its validity window closed before it was read (*rapid lapse*).

Instruction. For each, make the diagnosis of the path and propose the suitable answer: for incapacity, how the master, as referent, makes the reader *more autonomous* without dispossessing them or forcing what must remain closed; for disinterest, what belongs to the reader’s posture and what the referent can or cannot do about it; for rapid lapse, why it is not a failure but the normal fate of this datum. Conclude on what, in the batch, deserved to be read and what could legitimately remain unread.

Feedback criteria. The feedback examines whether the master does not treat every unread datum as a fault, whether they correctly diagnose the three paths, and — above all — whether, in the relation of referent, they make autonomous rather than making themselves indispensable. A master who “reads in place of” the non-knower instead of making them capable, or who forces a secret to open a path, misses the spirit of the competence.

Learning trace. *“Not all unread data are failures. My role as referent is not to read in place of others — it is to make them more autonomous, without dispossessing or forcing.”*

Part V — Beyond the Exercises

The Journeyman's Work

At the end of the apprentice phase, the passage to journeyman is validated not only by the eight apprentice exercises successfully completed. It requires a **journeyman's work**: a substantial piece of work, carried out under the direction of a master, which mobilizes several of the competences acquired and produces a signed work — a flow of observation built and tended for several months, or a complete diagnosis of an institutional system, or a delivery regulated from end to end (from drawing to reception by a situated reader), or a critical report on a public policy founded on data.

The journeyman's work is exhibited in the workshop, submitted to peer review, and archived as a textbook case.

The Master's Work

Likewise, the passage to master requires a **master's work**: a piece of work of even greater scope, which can take the form of a workshop one founds, of a series of apprentices one trains successfully, of a case law one helps to establish, of an exceptional case one documents for the community, or of a relation of referent held over time for a domain. The master's work is recognized by the fact that it *founds a school* — that it nourishes other apprentices and other journeymen beyond its author.

The Endless Pursuit

Becoming a master is not a point of arrival. It is a degree that must be kept up. The master remains in training: they continue to learn, to review their gestures, to let themselves be surprised by the works of apprentices, to arbitrate new cases. The expression *learning all one's life* takes on its technical meaning here: a master who stops learning stops being a master.

Conclusion — The Hand That Learns

This manual is an invitation. It proposes a way, without claiming that it is the only one. It lists exercises, without forbidding the invention of others. It describes a progression, without imposing a calendar. Its function is to

give a hold — so that a learner can begin, and so that this beginning is fruitful.

The craft, in the end, is not learned in the manual. It is learned by doing, under someone's gaze, with others, on works that matter. The manual is the threshold; what happens beyond it no longer belongs to writing. It belongs to the workshop, to the community, to the hand that little by little takes on the right gesture.

“One learns by doing — and each finished workpiece makes us a little more fit for the next.”

Landmarks

For the general status of the craft and its articulation by degrees, see the framing document *The Data Craft*.

For the competences that the exercises aim to have acquired, see the *Competency Framework of the Data Artisan*. Each exercise has the number of the corresponding competence (C1 to C23).

For the place where the exercises take place and the rituals that surround them, see *The Data Artisan's Workshop Book*.

For the ethical principles that underlie them, see *The Data Artisan's Craft Charter*.

For the conceptual foundation of the new exercises: Tome 2 (*From Spring to Torrent*) for transport, the fidelity of movement, the reader's share (E15, E16); Tome 3 (*The Trace or the Datum*) for the act of reading, the mute and the dead datum, the reader's window, the referent and the three paths (E7, E8, E17, E23).

Manual, June 2026, to be tested by practice.

The Data Artisan's Craft Charter

Framing Document v1.0.0 — What the Journeymen Hold to Be the Craft Well Done

“What is not named dissolves. What is named holds.”

— Contemporary saying

Preamble — Status of the Charter

This charter brings together the principles that data artisans hold to be the craft well done. It is not a regulation: it carries no sanction, creates no legal obligation, replaces no law. It is the explicit formulation of an ethics of the craft — what the journeymen promise, to themselves and among themselves, when they declare that they belong to this craft.

This charter will live with the community. The workshops that invoke it may sign it as it stands, or adapt it into local charters suited to their context, on condition of respecting its spirit. Future changes will be proposed and arbitrated by the masters in practice — not by an outside committee, nor by a top-down authority.

It rests on the trilogy *Tried by the Flow* as a whole: the craft it describes works the datum in its three phases — its making (Tome 1), its circulation (Tome 2), its reception (Tome 3). The last two tomes name this artisan explicitly, moreover: they are, in the words of Tome 3, the *referent of the proper domain of the datum* — the one to whom anyone who must read a datum and stumbles turns, and who, “*not a keeper who dispossesses, but a referent who makes one more autonomous*”, helps without dispossessing.

Seven articles structure it, which take up the seven pillars of the data craft as the framing document set them out: the material, the gesture, the tool, the work, ethics, transmission, the community.

Article 1 — The Material

The data artisan holds the flow of the real to be the raw material of their craft. They know that this flow does not belong to them, that it flows independently of them, and that it will go on flowing after them. They draw from this flow what their intention requires, without claiming to exhaust it or own it. What they draw from it takes nothing away from what another can draw from it — a non-rivalry that prejudges no legal regime.

They respect the material. They do not draw what should not be drawn; they do not over-draw what less would suffice for. They keep in mind the disproportion between what they capture and what flows: what they know of the real is only ever a fraction of what the real is.

And they accompany their material along its life. The datum they constitute — drawn from the flow, or instituted, or derived from other data — is most often meant to circulate, then to be read; the artisan does not lose interest in it once it is inscribed. They follow it up to the threshold of reading, where it is actualized if a reader reads it, or remains constituted without being actualized.

Article 2 — The Gesture

The data artisan holds their act of inscription to be a conscious, dated, situated act. They know that they choose what they draw, that they choose when they draw it, that they choose how they draw it — and that each of these choices excludes an infinity of alternatives.

They do not hide behind their tool. They know that the sensor is not the canal-keeper, that the algorithm does not answer for the reading, that the procedure is not the intention. And they know that the responsibility for the gesture, in the last instance, falls to them.

They also know that their gesture does not stop at inscription. Putting a work into circulation is an act — the act of exchange — that they answer for as for the first; and receiving it, reading it, or making it legible to others is a third. The artisan holds these three gestures — inscribing, exchanging, reading — to be the conscious acts of their craft.

Article 3 — The Tool

The data artisan keeps their tools in check. They know that each tool carries part of the know-how that presided over its design. They know the biases of their instruments as they know the biases of their annotation grids and their fixation media.

They do not let themselves be possessed by their tools. When a tool proves unsuited to a use, they change it or build another. When a tool carries unacceptable biases, they refuse it — even if it is widespread, even if it is officially validated, even if everyone uses it.

Article 4 — The Work

The data artisan holds their work to be a signed object. Every datum they deliver carries their signature: their name, the date, the main criteria of the work, the known limits. They deliver nothing anonymous; they deliver nothing they do not answer for.

They hold their work to be dated. They know that it ages, and they inform the user of it. They refuse to pass off a ripe datum as fresh, an archival datum as ripe, an inference as a fact.

They hold their work to be right. They refuse over-engineering as firmly as under-drawing. Doing what is needed, neither more nor less: that is the measure of the craft well done.

They hold their work to be made for someone. A work is not completed by the mere fact of being well made: it is intended for a situated reader. The artisan regulates its transport so that *the reader's share is practicable* — they are not content to set the datum down somewhere —, and their signature states the *intended reader's window*: to whom it is legible, on what conditions. A work that the intended reader cannot read is not actualized: mute for them, it does not realize its value; the artisan holds it to be their business that it arrives in legible form.

Article 5 — Ethics

The data artisan submits to four requirements that together form the probity of their craft.

The probity of inscription: what they inscribe, they inscribe faithfully. No rounding that flatters, no category that forces, no criterion that serves the intention instead of the material.

Lucidity about lapse: they know that their work ages, and they act on the consequences. They maintain what must be maintained, they archive what must be archived, they refuse to prolong artificially the life of a canal that should be closed.

Measure in drawing: they draw at the observational optimum, never beyond. They refuse accumulation without intention, storage without use, capture for capture's sake.

The probity of transmission and reception: they do not deliver a work whose reader's share would be impracticable; they signal when a datum risks remaining not actualized, or mute for its reader, without its value being realized; they hold the relation to the reader in the posture of the referent who makes autonomous and does not dispossess. They know that *abstention is not neutral*: not transmitting, not making legible, not making oneself a referent when one could, is not a neutral position — it is letting non-actualized data pile up.

Beyond these four technical requirements, the artisan refuses the gestures that degrade the material, the work or the craft — even when their hierarchy, their client or their institution orders them. They know that this refusal is, in the last instance, the dignity of the craft.

Article 6 — Transmission

The data artisan holds it a duty, from the degree of journeyman, to transmit in their turn. They take in apprentices, train them, expose them to works, correct them, let them fail so that they learn with their own hands.

They transmit the whole of the craft — not only the technical competences, but also the ethics, the doubt, the humility before what one does not yet know. They do not lie to the apprentice about their own uncertainties; they show them how they themselves cope with what is difficult.

They transmit without holding back. Know-how is not their private capital — it is the common good of the craft, which they received and must pass on.

Article 7 — The Community

The data artisan recognizes themselves as a member of a community of peers, and recognizes their peers as such. This recognition is mutual: no one declares themselves an artisan alone; one becomes one because other artisans recognize us.

They take part in the life of the community: they come to the reviews, they submit their works to the examination of peers, they take part in arbitrations. They accept criticism, and they criticize rigorously, without complacency.

They defend the craft against what damages it. When dubious practices are attributed to the data craft, they name them. When external recognitions (titles, certifications, labels) are awarded with no relation to the real craft, they contest them. The defence of the craft is everyone's business, first of all the masters', but also each artisan's, at their degree.

Signature Commitment

The artisan who subscribes to this charter declares it publicly. Their signature, in the register of the workshop or of the community, indicates that they commit to practising their craft consistently with its seven articles. This commitment is not perpetual: an artisan may, for personal or professional reasons, suspend their adherence. But as long as they sign, they bind themselves.

The signature is not a title. It opens no particular right in the outside world. It is an inner declaration — between the artisan and their craft, between the artisan and the community that recognizes them. It is this intimate dimension that gives it its strength.

Conclusion — A Word Given

This charter is a word given. To oneself first: by signing, the artisan gives themselves a framework of which they will be the intimate arbiter — it is they who will know, in conscience, whether they respect what they declared. To their peers next: the signature tells the other journeymen *“you can expect these seven requirements of me”*. To the user finally: the signature says *“what I deliver to you was made within this framework”*.

A word given has force only through the one who keeps it. This charter will make the craft live only if the artisans who sign it keep it, in the concreteness of their gestures, day after day. And it is precisely by keeping it — including when it costs — that they will make the craft something other than a word.

“The craft well done needs no witness. It needs an artisan who keeps it — including alone.”

Landmarks

For the conceptual foundation and the justification of each of the seven articles, see the framing document *The Data Craft*, Part II — “Substance: the Seven Pillars of the Data Craft”. For the conceptual foundation proper to the three phases: Tome 2, *From Spring to Torrent* (act of exchange, transport, practicable reader’s share, collective wisdom and non-neutral abstention); Tome 3, *The Trace or the Datum* (act of reading, reader’s window, referent, mute datum and dead datum).

For the competences that the probity of the craft presupposes acquired, see the *Competency Framework of the Data Artisan*.

For the place where the charter is lived day to day, see *The Data Artisan's Workshop Book*.

For the training that prepares one to sign it, see *The Data Artisan's Apprenticeship Manual*.

On the tradition of craft charters in the history of French craftsmanship: the statutes of the *compagnonnages* (notably those of the Association ouvrière des Compagnons du Devoir et du Tour de France) offer a reference model, at once demanding and adapted to the real life of practitioners.

Charter, June 2026, to be tested by practice.

Translation choices

These notes say how to read the English words that render the terms of the corpus; they are fixed for the whole English translation by the *Translation Charter of the Corpus*.

- **The data artisan** (*l'artisan de la donnée*): the referent whose domain would be the datum itself — a craft yet to be created, which this volume sets out to shape. The **data craft** (*l'artisanat de la donnée*) is that craft; the **canal-keeper** (*canalier*) is its trade name, and the **master canal-keeper** its highest degree.
- **apprentice, journeyman, master** (*apprenti, compagnon, maître*): the three degrees of the craft. *Compagnonnage* and the *Compagnons du Devoir* keep their French names: they are the French institutions of long transmission that the text cites.
- **the work** (*l'œuvre*): what the artisan delivers, signed; a **workpiece** (*un ouvrage*) is a piece of work in hand. The **work signature** is the sheet placed at the head of every delivery.
- **datum / data**. The corpus treats the datum as an individual: constituted by an act, dated, carried by media. The translation therefore says *datum* in the singular and *data* as its plural.
- **drawing / to draw** (*prélèvement, prélever*): the gesture of drawing from the flow, as one draws water; *derive* renders the other senses of *tirer*. **Under-drawing, over-drawing, re-drawing; entry** renders *relevé*, the value inscribed.
- **The three phases** (*les trois temps*): **making, circulation, reception**; the **two times** of the datum are the time of inscription and the time of the real.
- **the reader's share; transport medium** (*la part du lecteur; support de transport*): transport is a relation between two movements, accomplished when the reader's share is practicable; the transport medium moves, transmits or makes accessible.

- **actualized** (*actualisée*): the act by which a reading produces a meaning, never the updating of a file. **Mute** and **dead** keep apart a datum unreadable for one reader and a datum unreadable for all.
- **the three paths** (*les trois chemins*): **incapacity**, **disinterest**, **rapid lapse**. *Path* is kept for them; *way* or *route* renders *chemin* and *voie* elsewhere, and **itinerary** renders *parcours*.
- **Competences**. The seventeen competences of processual literacy keep, word for word, the titles fixed in the English translation of Tome 1 (*Reading the flow of the real behind the datum, Identifying the undrawn...*); the six competences added by this volume take the same gerund form (*Perceiving and distinguishing a datum, Holding the relation of referent and arbitrating the three paths...*). **Knowledge**, **know-how**, **assessment criteria**, **model test** render *savoirs*, *savoir-faire*, *critères d'évaluation*, *épreuve type*; the **learning trace** (*trace d'apprentissage*) is what an exercise leaves in the notebook.
- **Quotations**. Sennett is given in the original English of *The Craftsman* ("Making is thinking"); Saint-Exupéry in the received English translation of *Flight to Arras*. The contemporary sayings and the quotations from the trilogy follow the French and the English translation of the trilogy.
- **Titles**. *Tried by the Flow* renders *À l'épreuve du flux*; this volume is *The Data Artisan*; its documents are *The Data Craft*, the *Competency Framework of the Data Artisan*, *The Data Artisan's Workshop Book*, *The Data Artisan's Apprenticeship Manual* and *The Data Artisan's Craft Charter*.

Every theory gains in practice

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The trilogy *Tried by the Flow* kept to substance: it said what will long remain true of the datum — from its making to its reception —, and for that reason forbade itself from prescribing form, the tools, which go stale. This restraint left the practitioner wanting more. Where the datum is “collected”, “stored”, “monetized”, the gesture is invisible, the work anonymous, the signature absent. No one answers; and soon, no one knows how to read any more.

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The *data artisan* works a material that belongs to no one: the flow of the real. They draw from it what an intention requires, inscribe it, circulate it, and make it legible to whoever must receive it. Where people “collect” and “store” anonymously, the artisan signs their work and answers for it.

They are not the hero who would save humanity from the torrent. They are the one who holds a post: they dig a canal, tend it, make a legible datum reach whoever needs it, serve as referent for whoever stumbles, transmit to an apprentice. They make autonomous without dispossessing, and keep open the capacity to read where delegation threatens to extinguish it.

It remains to bring them into existence: naming them, establishing their framework by degrees, training by compagnonnage, federating the community. Not a revolution — a slow construction.

This framing is a lamp. It lights up the area where one must build. The construction belongs to those who will take up the tool.