

The TRACE Programme

Presentation File

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Tried by the Flow — A Processual Ontology of the Datum, continuity volume
The TRACE Programme — Presentation File

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The TRACE Programme — Presentation File

Territory · Resilience · Autonomy · Coordination · Enterprise

Introductory document and architecture of the file

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.

The Intention

This file proposes a programme: **to give territories a new craft — the data artisan — and to organize it as a sovereign and resilient network.**

It rests on a tested theoretical conviction and on a precise reading of the current situation. The datum is not an inert object that one stores; it is a processually constituted entity, whose value, potential from its making onwards, is realized only through reading. Without reading, it remains constituted, but not actualized. Now the bulk of the economic fabric — very small structures, of one to a few people — produces a growing mass of data that it knows neither how to read, nor how to protect, nor how to realize the value of. These data remain mute for it: illegible, vulnerable, unexploited. It is a dead loss for the entrepreneur, and a flaw for the sovereignty of the territory.

The TRACE programme answers this loss. It trains and federates local operators able to go down to this fine mesh, to structure the datum at the source, to make it legible and usable, and to secure it without ever dispossessing its producer of it. What these operators do for the civilian

sphere — making structures autonomous and resilient — directly serves the digital sovereignty of the territory.

The file goes from substance to action without a break: from an ontology of the datum, it deduces a craft; from the craft, an organization; from the organization, a enterprise model able to act on reality. This is the very movement it defends: **observing the real leads to modifying it**. Modifying what exists for the common good: such is the intention carried here.

The Theoretical Foundation

The programme proceeds from a completed conceptual work: a trilogy devoted to the processual ontology of the datum, articulated around the cycle making → circulation → reception. Three established results of this work govern all the rest.

The datum is processually constituted: it is made by a situated act of inscription, can circulate through a transport that is accomplished only if the reader's share is practicable, and is actualized only through reception — reading. Unread, it nonetheless remains constituted.

Reading a datum presupposes a referent: someone who knows how to question it about its origins and its destinations. Where this referent is missing, the datum remains mute. The data artisan is this referent — not a keeper who dispossesses, but the one who makes autonomous.

The value of a datum grows through federation: an individual hold weighs nothing on its own, but the aggregation of harmonized holds produces a real power. This power founds the collective horizon of the programme.

This foundation is not set out in the present file — it is the object of the work from which the file comes. The file takes on its established results and implements them.

Architecture of the File

The file is read in four parts, from the programme to its assessment. Each piece is autonomous; together, they form a coherent proposal.

Part I — The programme. What TRACE is, and why it holds.

1. **TRACE doctrine** — the line of trust (distributed sovereignty, never capture) and its technical base (federated learning). This is what makes the programme recommendable at large scale.
2. **Strategic presentation** — the strategic, technological and economic case, from the angle of territorial sovereignty and resilience.

Part II — The operator. Who acts, and in what structure.

3. **The enterprise model** — the craft of the data artisan, its charter, its ecosystem, its climb through the degrees.
4. **Economic model of the cooperative** — the federating structure that carries the network, its break-even point, its financing trajectory.

Part III — Implementation. The file that an operator submits to join the network and apply for support. Four sections, pre-filled on the common base of the craft, completed by each candidate for what is their own.

5. **Business plan**
6. **Financing plan**
7. **Financial forecasts**
8. **Technical note**

Part IV — Assessment. The project leader's lucidity about their own project.

9. **Strategic analysis of the deployment** — strengths, weaknesses, and handling of risks, tested against the current situation.

Annex.

A. **Filiation** — how the enterprise model proceeds directly from processual ontology.

What This File Transmits

This file presents a programme that is coherent, functional, feasible and viable, brought to the scale of a enterprise model. Its coherence, its structure and its positions are those of the project leader, who takes responsibility for them. What it transmits to its interlocutors is not a finished product to be adopted, but the **possibility of taking the project further** — up to a realization whose scale calls for a common and collective coordination. It is at this precise point that the interlocutor becomes co-pilot.

Reading Convention

The two pieces of the implementation (Part III) distinguish two kinds of content: **[COMMON BASE]**, which defines the craft and is a commitment, identical for every operator; and **[ENTREPRENEUR SECTION]**, specific to each candidate, to be completed. The figures are **standard projections**, illustrative and not ascertained results; they constitute a reusable template.

The data on the current situation are sourced from public publications of 2025-2026.

Doctrine of the TRACE Programme

The Line of Trust and Its Technical Base

Part I.1 of the file

The Name

The programme is called **TRACE** — *Territory, Resilience, Autonomy, Coordination, Enterprise*. Each term is chosen.

Territory: the scale of action is local, anchored, close at hand.

Resilience: the purpose is that a link in the mesh goes on functioning when the central network fails.

Autonomy: the operator makes their clients masters of their tool, they do not make them dependent.

Coordination: the network rests on mutual aid and solidarity between operators, not on a simple juxtaposition.

Enterprise: the elementary unit active at the end of the chain, without presupposing any technique or shutting the project into a particular field.

The word **TRACE** echoes the third tome of the work from which the programme proceeds, and this echo is deliberate. In the trilogy, the trace is at once what the observational datum proceeds from through an act of inscription and what alone remains of the dead datum, which no reader can any longer interpret. The name of the programme makes use of the fertile senses of the word, which are many: *to leave a trace* (marking for the future, being followed, identifying oneself); *to follow the trace* (deciphering, being effective, making progress); *to trace the trajectory* (cutting the furrow that canalizes and gives a common direction, from which future wealth emerges); and above all the trace as **origin** — what becomes a datum through the operator's work. TRACE is the programme that turns the trace into a controlled and transmissible datum, and that makes sure

that the territory's datum does not remain, for want of a referent, mute for those who produce it.

The field operator keeps the name of their craft: **data artisan**. TRACE is the programme; the artisan is its operator.

Part One — The Double Line

Two Sovereignties

The word sovereignty carries two senses here that must be distinguished in order to articulate them. The **sovereignty of the producer**: the operator works so that their client is master of their data — understands them, controls them, can take them away, decides alone what circulates. The **sovereignty of the State**: national strategic autonomy, which can involve secrecy and cleared compartmentalization.

These two sovereignties largely converge: both refuse dependence on infrastructures that are not under control, both value local processing and resilience. They diverge on one point, and the doctrine settles it: **the first gives power to the producer; the second can take it back from them.**

The Line

The data artisan operates on the side of **distributed sovereignty** — the one that is built by making each link in the mesh autonomous and resilient — and not on the side of intelligence, capture or armament.

They **structure** the producer's datum at the source, in open and controllable formats; they **secure** through compartmentalization, local processing, reduction of the attack surface; they **make resilient** — an equipped link in the mesh functions in the event of a network cut or of a failure of cloud services; they **make legible and autonomous**.

They do not **hand over** their client's datum to a third party without this client's decision; they do not **gather intelligence**, nor organize any surveillance or capture without the producers' knowledge; they do not **design weapons**; they do not **build black boxes** — their work remains transparent for whoever owns it.

The boundary is clear: the artisan makes the links in the mesh capable and autonomous; they do not turn this capacity into a means of observation or action directed against anyone. What sovereign links in the mesh then decide to pool is up to them, by decision, never up to the operator, by capture.

The Limit Is the Value

This restraint is not a weakness: it is the condition of trust at large scale. An operator who could turn their capacity against those they equip would be a risk. An operator whose doctrine **structurally forbids** capture and dispossession is a trusted third party — recommendable down to the finest link in the mesh, because one knows what they will never do.

For national sovereignty understood in the most solid sense, this gives not one more tool to watch over, but a fabric of links whose resilience holds *because* each one remains master in its own house. A distributed fabric has neither a single point of failure, nor a single point of compromise.

Part Two — Federated Learning

The Principle

Federated learning trains a common model from the data of many participants **without the raw data ever leaving their place of production**. Each link in the mesh computes locally, on its own data; only abstract parameters go back up — weights, gradients — never the datum itself. An aggregator combines them into an improved model, redistributed to all the links in the mesh.

This is the exact technical embodiment of the double line: the datum stays with the producer, so it can be neither captured nor taken away from them; and the link in the mesh contributes to a collective intelligence without ceasing to be sovereign over its material. It is also the machine-level expression of power through federation: an individual hold that is worth something only when aggregated, without a central decision on each one's material.

A Resilience That Defence Research Has Documented — in the Service of a Civilian Purpose

This is not an analogy. Defence research establishes that centralized cloud architectures show their limits in geographically dispersed deployments, and that edge computing — with, as core technologies, light models, federated learning and low-latency communication — strengthens speed, security and robustness. The building block that the artisan deploys in the civilian sphere to preserve the producer's sovereignty is the one that defence studies for its dispersed deployments. The programme reinvents nothing; it deploys, down to the fine mesh, a state of the art.

The Safeguards

Three protections make the refusal structural, and the doctrine imposes them. **Secure aggregation:** the aggregator sees only the sum of the contributions, never the individual contribution of a link in the mesh. **Differential privacy:** a calibrated noise prevents going back from the parameters to an identifiable datum. **Right of withdrawal:** a link in the mesh stops contributing when it wants, and can ask that its past contribution stop feeding the model. Participation is never presumed; it is intended and recorded.

What Federated Learning Brings to the Programme

It turns the mesh of workshops into a collective intelligent asset without encroaching on the sovereignty of each link in the mesh. It finds a horizon of value more solid than the sale of raw data: not selling the material, but pooling an intelligence. And it gives the programme a real technological interest — and, because the resilience it installs is of the kind that defence research studies for its own needs, a credible eligibility for support schemes for dual-use innovation, within the strictly civilian scope that the programme's doctrine locks: the artisan does not gather intelligence, does not design weapons.

The Coherence of the Whole

The double line says what the artisan refuses to do; federated learning makes this refusal structural — since the datum does not circulate, one cannot do with it what the doctrine forbids. Ethics and technique coincide. The programme does not promise not to dispossess: it is built so as not to be able to. That is what makes its strength, and what makes it precious for a sovereignty that wants not one more tool, but a fabric that is robust because each one remains master in their own house there.

The TRACE Programme — Strategic Presentation

A Mesh of Territorial Digital Resilience through Local Operators

Part I.2 of the file

The Proposal

The finest economic fabric — very small structures, of one to a few people — produces a growing mass of data that it knows neither how to read, nor how to protect, nor how to realize the value of. Large groups and structured SMEs are given support; this link in the mesh is supported by no one. It is the **last kilometre of digital resilience**: it is deserted, and it is porous.

TRACE constitutes a mesh of local digital operators — a new craft, trained and federated — able to go down to this link in the mesh to structure it, secure it and make it resilient. Each operator equips the very small structures of their territory with a **local, sovereign and resilient** infrastructure: processing as close as possible to the datum, functioning maintained off the network, reduced attack surface. The whole forms a fabric of autonomous links, with no single point of failure or of compromise.

What this mesh produces for the civilian sphere — resilience, sovereignty of the datum, continuity in the event of a crisis — is what defence seeks for the depth of the territories. The architecture used (edge, local-first, federated learning) belongs to the state of the art that defence studies for its own dispersed deployments. **The dual-use character is native, not stuck on.**

The programme asks for a partnership to start its **pilot phase** — the territorial demonstrator: qualifying the model, financing the dual-use innovation building block, testing on a territory the resilience of a mesh in degraded conditions.

The Strategic Context

Four facts of the current situation situate the opportunity.

Digital sovereignty is recognized as a front in its own right. The armed forces call it “the other front”; it has become a strategic decision at leadership level. The movement is real and funded.

The defence economy irrigates the territories, and it is dual-use. The defence industrial and technological base brings together some 220,000 jobs; its typical profile is an SME of which less than 20% of turnover comes from defence. Dual use is the norm. The defence innovation doctrine explicitly aims to federate the local economic fabric and to carry innovation into the depth of the territories: TRACE fits into this intention.

Sovereignty capital is looking for territorial projects. European sovereign bonds, dedicated public and private funds, dual-use innovation schemes: these financings are looking for projects that embody strategic autonomy at the concrete scale.

The cyber threat has reached the fine mesh. More than a third of small structures have already suffered an incident. The vulnerability of the finest fabric — the least protected — has become a stake of collective security.

The Last Kilometre

Existing schemes deal with large groups and structured SMEs. None goes down to the link in the mesh made of one to three people — artisans, farmers, shops, small associations, micro-local authorities. Now this link in the mesh produces fine territorial data (agricultural, logistical, craft, environmental), part of which is strategic; it is the most vulnerable, without internal competence or protection; and it is the most numerous, and therefore decisive for overall resilience.

No one knows how to equip it, because no one has the economic model to go down that low with a relation of trust and proximity. This is the void that TRACE fills. The mesh of local operators solidifies the territorial technical fabric where it is most porous — with a relation of trust that only a local actor establishes.

Technological Credibility

TRACE does not propose a technology to be invented, but the deployment, down to the fine mesh, of building blocks that belong to the state of the art and converge with defence doctrine.

Edge / local-first architecture. Processing is done as close as possible to the source, on a modular local infrastructure (from the terminal to the isolated rack). Edge computing strengthens speed, security and robustness in dispersed deployments, where the centralized cloud shows its limits. Continuity of functioning off the network — cut, failure of a national service, crisis — is intrinsic.

Federated learning. The mesh trains models useful to all the links without any raw datum leaving its workshop: only abstract parameters circulate, under secure aggregation and differential privacy. The mesh becomes a collective intelligent asset without encroaching on the sovereignty of each link.

Sovereignty by design. Compartmentalization, inert exchange formats, controlled transfers, local processing: the attack surface is reduced by construction. The distributed fabric has neither a single point of failure, nor a single point of compromise.

The Doctrine of Trust

TRACE rests on a doctrine of the double line that structurally forbids its operators capture and dispossession: the operator makes the links in the mesh capable, autonomous and resilient; they never hand over the datum of a link in the mesh without its decision; they do not gather intelligence, do not monitor, do not design weapons; their work remains transparent for whoever owns it.

This restraint is the condition of trust at large scale. An operator whose doctrine forbids capture is recommendable down to the finest link in the mesh, because one knows what they will never do. Federated learning makes this refusal structural: since the datum does not circulate, one cannot do with it what the doctrine prohibits. (*Doctrine detailed in piece I.1.*)

The Value

Strategic. Reaching, with trust, the last kilometre that no other scheme reaches. Densifying and securing the territorial economic fabric at its finest and most vulnerable link. Constituting, through the mesh of sovereign edge nodes, an infrastructure of distributed resilience, robust through the absence of a single point of failure.

Technological. A real demonstrator of distributed sovereignty: edge, local-first, federated learning under safeguards, in real conditions down to the very small structure. A credible technological challenge, native dual-use innovation, direct convergence with defence doctrine.

Economic. A territorial economic dynamic, sovereign by construction, and a reproducible craft — and therefore a source of qualified jobs that cannot be relocated. The cooperative model brings together operators, local authorities and public actors in a shared governance. The programme gets started all the more easily since a public commissioner of resilience can be its first client, where the private data market remains immature.

What the Programme Asks For, and from Whom

TRACE is looking for co-pilot partners to start its **pilot phase** — the move to the territorial demonstrator. Three registers, three families of interlocutors.

Support for dual-use innovation. The development of the technological building block (sovereign edge infrastructure and federated learning under safeguards) belongs to dual-use innovation. The **RAPID scheme** (*régime d'appui à l'innovation duale*, the support scheme for dual-use innovation), run by the Defence Innovation Agency (*Agence de l'innovation de défense*) and the Directorate General for Enterprise (*Direction générale des entreprises*), finances civil-defence dual-use projects carried by SMEs. The defence **technical innovation clusters**, whose vocation is to federate the innovation of the local fabric, are the natural interlocutor for territorial anchoring. At the allied scale, dual-use accelerators have made resilience and secure information sharing pilot areas.

Territorial anchoring. Local authorities and support networks know the fabric, carry the stake of their territory's resilience, and can be referrers and first commissioners of a demonstrator.

Qualification and financing. Sovereignty funds, public and private, are looking for territorial projects. Cyber diagnosis and maturity schemes aimed at SMEs offer a first door to qualification.

Proposed Demonstrator

A framed demonstrator, on a pilot territory — a rural or peri-urban area bringing together a sample of very small structures equipped by one or two operators. Object: to demonstrate three things. That **going down to the fine mesh** is possible with a relation of trust — effective structuring and securing of structures of one to three people. That **resilience in degraded conditions** is real — the mesh functions during a prolonged network cut

or a simulated unavailability of cloud services. That **federated learning under safeguards** produces a useful collective intelligence without any raw datum leaving its link in the mesh. Deliverables: a documented return on experience, measured resilience indicators, a model for qualifying operators, a costed replication trajectory.

Positioning and Name

The field operator remains the **data artisan**: this name carries proximity, made-to-measure work, responsibility for the work and trust — exactly the qualities sought. The programme, presented from the angle of sovereignty, takes the mission name **TRACE**, each term of which is chosen: *Territory* (the local scale, close at hand), *Resilience* (functioning maintained when the centre fails), *Autonomy* (the client made master of their tool), *Coordination* (the mutual aid and solidarity of the network), *Enterprise* (the elementary unit active at the end of the chain, outside any technical jargon). The word itself says the work: turning the trace into a controlled and transmissible datum, and making sure that the territory's datum does not remain mute for those who produce it.

In One Sentence

TRACE does not ask anyone to believe in a technological promise — the building blocks exist and converge with defence doctrine. It does not ask anyone to take a risk of trust — its doctrine makes it structurally incapable of capturing or dispossessing. It proposes something rare and precise: reaching, with trust, the last kilometre of territorial digital resilience, and making of it a fabric that is robust because it is distributed.

The Enterprise Model

An Entrepreneurial Form for the Craft of the Data Artisan

Part II.3 of the file

For each field, we know whom to turn to: a leak? the plumber. A noise in the engine? the mechanic. A symptom we do not understand? the doctor, who refers us on if need be. But for the datum — the disk that fills up, the software or the connection that crawls, the backup that is lost or at risk of being lost —, this referent does not exist: it is up to us to diagnose everything, then to run from one provider to another. Who, then, is the referent of the datum itself? The one who would know how to draw it accurately, keep only what is useful and set the rest aside, make sure it circulates without a hitch, choose the right tools — and teach us, in our turn, to read it. The corpus calls this person the data artisan. And it makes a finding: the data artisan does not yet exist.

This craft is therefore to be created. But in what form of enterprise? The necessary competences already exist — development, data administration, digital consulting — but they are scattered, practised under disparate titles, without a label that tells the end client whom to turn to. This document describes a **enterprise model** that brings them together under a recognized and conventional banner, and that makes the climb through the degrees practicable — apprentice, journeyman, master. This model is not an existing business given as an example: it is a **proposed form**, the first dated form of the craft, meant to constitute the **format of the apprentice's post** — the one in which a digital professional proves themselves in the craft of the data artisan. This document defines what this model lastingly is, then how it would operate.

I. The Craft

What the Data Artisan Is

The data artisan accompanies very small structures — the solo entrepreneur, the association, the small local authority — in the control of their digital capital. They do not sell software: they hold, for their clients, the relation of **referent** on the datum. They draw accurately, locate the right need, make practicable the share of whoever will read, and make the client more autonomous without dispossessing them.

They are not opposed to the data industry; they occupy the place that it does not know how to hold. Large groups have their teams; very small structures interest neither software publishers nor service companies. It is this place that the artisan occupies — because that is where their craft has its reason for being.

The founding gesture is the **systemic leap**. The solo entrepreneur wears many hats out of necessity: they carry all the functions, and really master only one. The artisan allows them to select the tasks that do not call on them — follow-ups, tracking, accounting — in order to automate or delegate them, and to concentrate on the heart of the craft. The mental load lightens; the time freed goes to what counts.

The artisan is not a publisher who locks in, not a provider who makes themselves indispensable, not a seller of promises. These three negations are points of the charter.

The Workshop Charter

Seven articles found the craft.

The material — the datum that the client's activity produces; the artisan draws from it what the use requires, without claiming to exhaust it.

The gesture — inscription is an intentional and situated act; modelling the process always comes before the code.

The tool — sized to the right need, neither blind nor over-engineered, the optimum being set again at each assignment.

The work — signed, the artisan alone answers for it.

Ethics — refusal of the gestures that degrade the material, the work or the craft; telling the client the truth, even when it is hard; naming the two sides of digital technology.

Transmission — training other artisans; recognition by peers, never by an external authority.

The community — the artisan does not hold alone; a network defines what is done well and institutes the referents.

The Stance of Referent

This is the axis around which everything turns: helping, making autonomous, not dispossessing. Three concrete commitments.

Living documentation: each tool comes with a map that the client understands; they are the editor-in-chief of their data, not a tenant of them.

Co-design: the client identifies for themselves what deserves automation and what must remain manual; they keep decision-making sovereignty over their craft gesture.

Tended capacity to read: the tool makes the business owner more capable of reading their data, never dispenses them from it — a safeguard against excessive delegation.

The recurring assignment, on which the economic model rests, must be that of the blacksmith one calls back for a new piece, not that of the software one can no longer get out of.

Verifiable criterion: at any moment, a client must be able to take back control or change provider without losing their data or their understanding.

What the Artisan Holds to Be True about the Datum

The right need can be reopened each time: no universal setting; compiling a series into an average is not killing the datum but deriving another from it, a consolidated one, at another optimum. Not all unread data are failures: a datum from a closed financial year sees its window close for current steering, without ceasing to be valid for the archive. Transport is accomplished only if the reader's share is practicable: one does not deliver a raw datum to someone who has neither the time nor the corpus to decipher it; one consolidates it. The speed of the flow is not a fatality: the tool gives the business owner back a hold on their trajectory, it does not sell an adaptation to an excess that is undergone.

II. The Ecosystem and the Horizon

What the Workshop Moves Within

Three circles.

The clients — the solo entrepreneur first, the one who carries all the functions and masters only one.

The peers — the other artisans, present or to be trained, through whom recognition happens and with whom the power that none has alone is built.

The partners — local authorities, support networks, R&D centres: co-pilots who anchor the initiative and take part in instituting the craft, at the level of collective decision.

The Federating Horizon

The artisan alone weighs nothing in the data economy; the mesh does. This is power through federation: the effect is worth something only when aggregated. The horizon is the integration of very small structures into sectoral data spaces, via a sovereign marketplace where the artisan serves as a technical bridge.

This horizon is named for what it is: not an acquired income, but a sovereign economic dynamic to be brought about, which presupposes converging wills — political, industrial, territorial. Short-term income comes from assignments, not from the sale of data. Aggregation produces power, not automatically wisdom: the marketplace federates, but its governance belongs to a collective arbitration. And very small structures do not abstain from this economy: they are excluded from it for want of capacity — the artisan’s work is to give them this capacity, after which only does their participation become a choice.

III. The Climb through the Degrees

The craft is climbed in degrees. Moving up is conditional on a **sustained activity** — not on reaching an amount of turnover. The step is not a frozen turnover threshold; it is the proof of an installed and lasting activity, attested by an obligation of result applied to tasks that really belong to the craft: number of assignments per category over the year, recurring clients kept over time, diversity of the works delivered. The federating body follows the apprentice and checks that their work matches the expected competences; turnover is only an indicator, never the sole judge. The criterion holds whatever the area — a rural artisan sustains their activity differently from a metropolitan one, but both sustain it.

Degree	Situation	Role
Apprentice	Start as a micro-enterprise	Trained and sponsored; validates their first works, builds up their area and order book
Journeyman	Sustained activity (stabilized micro-enterprise, or company if growth justifies it)	Becomes sponsor of apprentices; hands on their own basic clientele to them while moving upmarket themselves

Degree	Situation	Role
Master	Installed and recognized activity	Management, advice, supervision; technology monitoring; common policies; collective intelligence

Recognition is by peers. The handing on of clientele from the journeyman to the apprentice frees the journeyman for higher-value assignments and gives the apprentice a real base on which to prove themselves. An apprentice who is satisfied with their activity as a micro-entrepreneur can keep it: the degree opens possibilities, it does not impose growth.

This model of moving up through results is suited to the situation: the market already has data-management competences that can switch to a data micro-enterprise and quickly prove themselves; digital technology evolves fast, and real activity combined with sponsorship keeps the link with the field and the circulation of fresh information; training rests on substance, and therefore does not suffer from technological turns.

IV. The Operational Application of the Model

Typical Profile of the Project Leader and Status

The model rests on a typical profile: a digital professional with a **double competence** — discernment (modelling a process, judging the right need) and making (designing, developing, maintaining). The career of an experienced engineer or developer grounds both. Start-up status: micro-enterprise — simplicity, testing the model without heavy fixed costs, securing the project leader's income by keeping their allowance during the ramp-up.

The Offer

Line	Client	Typical work	Model
Steering	Solo micro-entrepreneur	Dashboard; delegation of the tasks that do not call on them	Fixed price + maintenance
Start-up	First-time entrepreneur	Accessible management tool, teaching through action	Subscription or project
Collective	Association, local authority	Digital register, structured data, secure exchange	Advice / support

The substantive deliverable is identical for all three: a signed, documented work, which the client understands and controls. The approach is always that of the **real gain promised** (time, mental load, quality, hold on the activity), never that of the constraint undergone. A regulatory obligation can serve as a hook to open the conversation, never as a value proposition.

The Gesture of the Assignment

Every assignment distinguishes the heart of the craft (the know-how, where computing dictates nothing) and the support matrix (the peripheral tasks that can be automated): the artisan models the matrix to free the heart of the craft. Deployment in three phases — immersion (vital base), adjustment (the client gets used to it and identifies their real needs), expansion (modules added if the need justifies it). The tool does not grow heavier with use: digital hygiene maintains a constant speed.

The Infrastructure

Right sizing: start light, fill out as the activity crosses steps. Processing as close as possible to the source (edge, local-first): the raw datum does not have to leave the business, and the artisan holds the post of the human referent who ensures the quality of what goes into the machine and the legibility of what comes out of it. A short data loop, open and controllable formats, maintainable and proportionate hardware.

Steering the Trajectory

The model steers its activity as the artisan teaches their clients to steer theirs: with a control chart, with a central line and limits of vigilance and tolerance. The stake is not maximum speed, but holding the trajectory. Four seasons: **launch** (trying out the craft’s assignments at a day rate, securing cash at an hourly rate), **adjustment** (selecting the assignments, staying within the tax tolerance), **consolidation** (craft project, recurring income from support), **change of scale** (preparing, if the lasting activity justifies it, the change of status). The crossings of tax thresholds are anticipated and steered, never undergone.

Risks and How They Are Handled

Risk	Handling
Convincing people of the benefit of the datum	Teaching; proactive clients; proof by demonstration
Obsolescence of tools	Proven architectures; monitoring; strict separation of lasting substance and dated form
Client dependence	Verifiable criterion of reversibility; documentation; autonomy

Risk	Handling
Excessive delegation on the client's side	The tool tends the capacity to read, it does not dispense from it
Irregular income at start-up	Order book of assignments; mixed invoicing

V. The Reproducible Character

The model does not have as its sole end to succeed as a business. Its ultimate success is that the craft reproduces itself — that other artisans are trained and mesh the territory. Everything defined here is meant to become transmissible: the charter, the stance, the method of assignment, the steering of the trajectory. The criterion of success of the model is clear: if, in a few years, the application that illustrates it is outdated but the craft of data artisan exists and is transmitted, the model will have fulfilled its office. The form will have gone stale; the substance will have held. That is what is asked of a first dated form — opening the way, then stepping aside before the series.

Economic Model of the Cooperative

The Federating Structure of the Data Craft

Part II.4 of the file

The Principle

The federating structure of the TRACE programme takes the form of a **cooperative — a cooperative society of collective interest (*société coopérative d'intérêt collectif*, SCIC)**. The choice is one of substance, not of opportunity: the SCIC brings together in one governance the artisans, the public partners and the clients, and embodies in its form the collective sovereignty that the programme carries. A self-instituted private body would arouse distrust; a cooperative of collective interest founds a legitimacy, and opens access to the financing of the social and solidarity economy, of innovation and of sovereignty.

The cooperative applies to the network the gesture that the artisan applies to their clients: it carries the matrix — back office, monitoring, purchasing, commercial delegation — so that each artisan concentrates on the heart of the craft. The economic model is the institutional translation of the substance.

The Pooled Functions

Three functions, with their annual cost including charges (order of magnitude, employer's contributions included).

Function	Role	Annual cost
Back office	Accounting, legal, GDPR, administration	≈ €45,000
Coordinator / facilitator	Coordination, facilitation, training of apprentices, partner relations	≈ €57,000
Operational delegate	Commercial delegation, client follow-up, quotes — for the artisans who hand them over	≈ €48,000

The operational delegate is an **ancillary trade**: a profile competent in digital matters who does not claim the craft of artisan, but holds for the network the tasks that the artisans want to delegate. It is a qualified job that cannot be relocated, created by the mesh — and the answer to the dispersion that threatens the solo artisan.

The Thresholds of Viability

The Back Office and Delegation

At a contribution of 4% of turnover, a back office is financed as soon as some thirty artisans at cruising speed contribute. An operational delegate serves 6 to 8 artisans in parallel, for a cost of the order of €6,000 per artisan served — that is, thirteen invoiced days. **Delegation is a net gain**: for a solo artisan, delegating quotes, follow-ups and tracking frees of the order of eighteen days a year; invoiced again as craft assignments, that is more than the cost of delegation, even before the mental load saved. The neutrality threshold is crossed as soon as thirteen days are freed and invoiced again.

The Two-Population Model

A real network mixes two populations with distinct economic profiles. The break-even point of the coordination structure is calculated on this composition.

Population	Reference turnover	Contribution (4%)
Apprentice	≈ €28,000	≈ €1,120
Journeyman	≈ €70,000	≈ €2,800

With a cruising ratio of one journeyman to three apprentices — consistent with sponsorship and the handing on of clientele — and including the complementary revenue (business-referral margin of 8%, margin on pooled

services), the **break-even point of the coordination structure (coordinator + back office, $\approx$ €102,000) is reached at 40 members**: 10 journeymen and 30 apprentices.

Composition	Contributions	+ Business referral	+ Services margin	Total	Struct. costs
3 journ. + 9 appr.	€18,480	€8,400	€4,830	€31,700	€102,240
5 journ. + 15 appr.	€30,800	€14,000	€9,660	€54,460	€102,240
8 journ. + 24 appr.	€49,280	€22,400	€9,660	€81,340	€102,240
10 journ. + 30 appr.	€61,600	€28,000	€14,480	€104,080	€102,240

Below 40 members, the gap is filled by the start-up and structuring grant. Beyond that, the cooperative produces a surplus that finances a second back office, an additional delegate or training.

The Sources of Revenue

Four sources, in order of increasing sustainability. **Contributions** from the members (4% of turnover): base revenue, which grows with the network. **Business-referral margin** ($\approx$ 8%): when the network brings an assignment to an artisan, a margin goes back to the cooperative — it rewards exactly the service rendered, and benefits above all the apprentices, who receive the clientele handed on. **Margin on pooled services** (back office and delegation re-invoiced at cost plus $\sim$ 10%). **Earmarked grants and financing** (social and solidarity economy, innovation, sovereignty): decisive at start-up, they decrease as the network grows — a cooperative kept on a drip over the long term would be a failure of the model.

The Financing Trajectory

Four phases. The grant is the starter motor that one switches off once the engine is running.

Phase	Members	Contributions	Structure costs	External financing
0 — Start-up	$\sim$ 5	€6,750	€57,000 (coordinator only)	$\approx$ €50,000 (grant)

Phase	Members	Contributions	Structure costs	External financing
1 — Structuring	~15	€25,000	€57,000	≈ €37,000 (grant + margins)
2 — First back office	~32	€49,000	€102,000 (coord. + back office)	≈ €53,000 (grant + margins)
3 — Cruising	~40 and over	€62,000 and over	€102,000	Self-financed by contributions + margins

The need for external financing **peaks in phase 2**: the structure takes on the weight of the back office before the number of members can carry it. This is the trough of the wave, and it is prepared for in advance.

Financing Plan for Phase 2

Phase 2 brings together two distinct needs, which call for two families of schemes.

The development of the technological building block (sovereign edge infrastructure, federated learning under safeguards) belongs to dual-use innovation. It is eligible for the **RAPID scheme** (*régime d'appui à l'innovation duale*, Defence Innovation Agency (*Agence de l'innovation de défense*) and Directorate General for Enterprise (*Direction générale des entreprises*)), which finances civil-defence dual-use projects carried by SMEs, through grants. The defence **technical innovation clusters** and the **sovereignty funds** (public and private) complete this register. This financing does not pay for operation: it develops an asset — the network's technological edge.

The operation of the coordination structure during the ramp-up (the deficit of ≈ €53,000 in phase 2) belongs to distinct schemes: **social and solidarity economy financing** that an SCIC can mobilize, **support from the co-pilot local authorities** (which carry the stake of their territory's resilience and can support the demonstrator), **regional schemes supporting** creation and structuring. The territorial demonstrator (piece I.2) can carry part of this need, a public commissioner of resilience being the natural first client.

The rule that governs this plan: the grant finances a **take-off**, never a drip. The weaning trajectory is explicit — at 40 members, the cooperative flies on its own wings. That is what makes it fundable: a partner supports a programme that becomes independent, and whose territory's resilience the partner will, along the way, have brought about.

What the Model Demonstrates

Pooling is viable early: a back office from some thirty artisans, a delegation from six to eight served. Delegation is a net gain for the artisan, and a source of jobs for the territory. The grant is a starter, not a fuel: the break-even point at 40 members is reachable by a local mesh, and the weaning trajectory is clear. The model does not ask for a structure to be financed, but for a take-off to be started which, as it unfolds, densifies and secures the fabric of a territory.

Application File — Apprentice Data Artisan

Section 5 — Business Plan

Part III of the file

This file serves two uses: **seeking** aid, financing and support from public or private structures; **applying** for the degree of Apprentice to the federating body of the data craft — the accepted submission serving as an admission contract (access to training and sponsorship). Two kinds of content:

[COMMON BASE] defines the craft, is a commitment, identical for every operator;

[ENTREPRENEUR SECTION] is specific to the candidate, to be completed.

The examples are **standard projections**: they illustrate a possible form of sole-trader business allowing the apprentice to prove themselves, not an existing business nor ascertained results.

1. The Project Leader

[ENTREPRENEUR SECTION]

Field	To be completed	Standard projection
Project leader	[...]	Digital professional with a double competence
Legal form	[...]	Sole-trader business (to be defined by the candidate)
Start-up status	[...]	Micro-enterprise
Location and area	[...]	A local area and its neighbouring areas

Career and double competence.

The artisan relies on a double competence: **discernment** (modelling a process, judging what deserves to be drawn, locating the right need) and **making** (designing, developing, maintaining the tool). [The candidate explains how their career grounds both.]

Standard projection. The career of an experienced engineer or developer grounds both. Discernment: rigour of analysis, ability to “speak the client’s craft” in order to model their flows. Making: complete expertise, from analysis to deployment.

2. The Craft

[COMMON BASE]

The data artisan accompanies very small structures in the control of their digital capital. They do not sell software: they hold the relation of **referent** on the datum — drawing accurately, locating the right need, making the reader’s share practicable, and making the client autonomous without dispossessing them. They occupy the place that the data industry does not know how to hold: the link in the mesh made of very small structures.

The founding gesture is the **systemic leap**: allowing the solo entrepreneur to delegate or automate what does not call on them — follow-ups, tracking, accounting — in order to concentrate on the heart of the craft.

Mission. Structuring and realizing the value of the business data in order to improve operational efficiency, by making the structures autonomous in their own steering.

Values. Teaching (making autonomous), proximity, simplicity, transparency, versatility, commitment (answering for one’s works), lucidity (telling the truth, naming the two sides of digital technology).

The artisan is not a publisher who locks in, not a provider who makes themselves indispensable, not a seller of promises.

[ENTREPRENEUR SECTION] — Executive Summary

[5 to 10 lines: how the candidate embodies this craft in their area.]

Standard projection. Accompanies the very small businesses, associations and local authorities of their area through a data-craft approach: tailor-made, simple and durable solutions, combining the rigour of the engineer with the agility of modern tools.

3. The Market

[COMMON BASE]

The software market is tipping over: AI and interoperability allow ultra-specific solutions where “Swiss-army-knife” software fails through its complexity. Very small structures do not need an ecosystem to adapt to, but targeted tools. Two needs converge — tailor-made development and support in putting data to use — and it is their intersection that the artisan occupies.

A majority of very small structures declare themselves in favour of digital technology while only a minority is equipped; recourse to AI is progressing fast. This gap between declared interest and real equipment **is** the market space.

Two horizons not to be confused. The immediate use of data (structuring and reading in order to steer) is a real benefit, available from the first assignment: it is the heart of the offer. Commercial monetization (marketplaces, data spaces) does not pre-exist as a resource: it is a sovereign economic dynamic to be brought about, which presupposes converging wills. The artisan does not promise it as a guaranteed income; they carry it as a collective ambition, favourable to the territory. Short-term income comes from assignments.

Competition. Service companies (too expensive for a small project), web agencies (oriented towards communication), generalist freelancers (at a distance): the artisan stands out through proximity, modelled tailor-made work, the stance of referent. Faced with SaaS and ERP software that requires the client to adapt to the tool, the artisan does the opposite — they shape the tool around the craft gesture.

[COMMON BASE] — The Three Personas

The Pilot (established micro-entrepreneur): consolidating their income, reducing their mental load → a steering dashboard that frees human time.

The Starter (first-time entrepreneur): moving from the idea to action without fear of complexity → accessible interface, teaching through action,

tools for self-observation.

The Collective (association, local authority): collaborating without losing control → private and closed network, secure and anonymized datum between members.

[ENTREPRENEUR SECTION] — Local Market

Field	To be completed	Standard projection
Target very small businesses in the area	[...]	Several thousand very small businesses (0-5 employees) in a local area
Average budget per assignment	[...]	€1,000 to €3,000 (order of magnitude)
Sources and field interviews	[...]	Barometers and observatories; interviews with target structures

Substantive lesson: the offer must be personalized and specific to a precise need; standardized turnkey solutions do not interest this clientele.

4. Commercial Strategy

[COMMON BASE] — The Three Lines of Offer

Line	Client	Typical work	Model
Steering	Solo micro-entrepreneur	Dashboard; delegation of the tasks that do not call on them	Fixed price + maintenance
Start-up	First-time entrepreneur	Accessible management tool, teaching through action	Subscription or project
Collective	Association, local authority	Digital register, structured data (compliance as a bonus), secure exchange	Advice / support

Identical substantive deliverable: a signed, documented work, which the client understands and controls.

[COMMON BASE] — The Approach through Gain

The artisan does not win a client through constraint. Putting forward an obligation that is undergone only lightens a problem that did not exist before the rule, and leaves the client in their previous situation. The artisan proposes a **real gain**: time freed, less mental load, a better quality of work, a hold regained on the activity. The proposal is always “you are really going to gain”, never “you risk losing”. A regulatory obligation can serve as a hook to open the conversation, never as a value proposition.

[COMMON BASE] — The Test of Recurrence

The recurring assignment must be that of the blacksmith one calls back for a new piece, not that of the software one can no longer get out of.

Contractual criterion: at any moment, the client must be able to take back control or change provider without losing their data or their understanding.

[ENTREPRENEUR SECTION] — Outreach and Start-Up

Field	To be completed	Standard projection
Outreach by segment	[...]	Steering → local network, referrers; Start-up → incubators; Collective → trade fairs, small calls for tender
Signature line	[...]	“One craft, data”
Intended commercial start	[...]	First reference assignments and test client to be secured; local partnerships to be formed

5. Means of Production

[COMMON BASE]

Right sizing: start light, fill out as the steps are reached. Maintainable and proportionate hardware. Processing as close as possible to the source, short data loop, open formats.

[ENTREPRENEUR SECTION]

Field	To be completed	Standard projection
Human	[...]	Sole trader
Hardware / premises	[...]	Development workstation, vehicle; home + local coworking space

6. Status and Climb through the Degrees

[COMMON BASE]

The craft is climbed in degrees. Moving up is conditional on a **sustained activity** — not on an amount of turnover. The step is not a turnover

threshold; it is the proof of an installed and lasting activity, attested by an obligation of result on tasks that really belong to the craft: number of assignments per category over the year, recurring clients kept over time, diversity of the works. Turnover is only an indicator; the criterion holds whatever the area.

Degree	Situation	Role
Apprentice	Start as a micro-enterprise	Trained and sponsored
Journeyman	Sustained activity (stabilized micro-enterprise or company)	Sponsor of apprentices; hands on their own basic clientele to them while moving upmarket
Master	Installed and recognized activity	Management, advice, supervision, collective intelligence

Recognition by peers, never by an external authority. An apprentice satisfied with their activity as a micro-entrepreneur can keep it.

[ENTREPRENEUR SECTION]

Field	To be completed	Standard projection
Status and justification	[...]	Micro-enterprise; testing the model without fixed costs
Securing income	[...]	Keeping the allowance during the ramp-up

7. Risks and Objectives

[COMMON BASE] — Risks of the Craft

Risk	Handling
Convincing people of the benefit	Teaching; proactive clients; demonstration
Obsolescence of tools	Proven architectures; monitoring; separation of substance and form
Client dependence	Verifiable criterion of reversibility
Excessive delegation	The tool tends the capacity to read
Irregular income	Order book of assignments; mixed invoicing

[COMMON BASE] — Three-Year Trajectory

Launch (trying out the craft’s assignments, keeping cash secure) → adjustment (selection, tax tolerance) → consolidation (craft project, recurrence) → change of scale (change of status if the lasting activity justifies it; potential move from Apprentice to Journeyman, triggered by demonstrated sustainability).

[ENTREPRENEUR SECTION] — Quantified Objectives

[See Sections 6 and 7.]

Standard projection. The quantified objectives are derived from the ranges of the Parameter Bar (Section 6) and from the standard income statement (Section 7); they are to be set by the candidate for their area.

Application File — Apprentice Data Artisan

Section 6 — Financing Plan

Part III of the file

1. A Craft of Low Capital Intensity

[COMMON BASE]

The data craft requires little start-up financing: one starts light, without stock or obligatory commercial premises; the bulk of the capital is intangible — the project leader's competence. Three consequences: lasting needs (investments) are modest; the critical item is **start-up cash**, which covers the period before regular income; **securing the project leader's income** (personal contribution, keeping the allowance) weighs more than borrowing.

2. Initial Financing Table

[COMMON BASE]

The structure of the initial financing is stable, whatever the candidate: modest **needs** (hardware, registration and launch, subscriptions and contributions for the first year, consumables, safety cash) and **resources** dominated by the personal contribution and, where relevant, an aid or grant applied for, borrowing remaining marginal. The orders of magnitude of each item are derived from the Parameter Bar (\$4); the candidate sets them for their own situation.

[ENTREPRENEUR SECTION] — to be completed

Needs

Item	Amount
Computer hardware	[]
Registration, launch	[]
Subscriptions + contributions (year 1)	[]
Consumables (year 1)	[]
Safety cash	[]
Total	[]

Resources

Item	Amount
Personal contribution	[]
Aid / grant applied for	[]
Loan	[]
Total	[]
<i>Income support (outside the plan)</i>	[]

Keeping the allowance secures the project leader’s income during the ramp-up; it finances the person, not the structure, and appears outside the business’s financing plan.

3. Aid and Support

[COMMON BASE]

The file applies simultaneously to the **classic business-creation ecosystem** (aid, regional schemes, support networks) and to the **federating body of the data craft**, whose acceptance serves as an admission contract to the degree of Apprentice (training, sponsorship, membership of the network). The latter brings an intangible capital that does not appear in euros but reduces the risk.

[ENTREPRENEUR SECTION]

Scheme sought	Body	Nature [...]
[...]	[...]	[]
Apprentice degree	Federating body	Training + sponsorship (non-monetary)

4. Bar of Reusable Parameters

[COMMON BASE]

The model is set by a few key parameters; illustrative reference values give their order of magnitude, framed by a realistic range.

Parameter	Standard reference	Realistic range
Day rate (equiv. excl. tax)	€450	€350 – 600
Hourly rate (equiv. excl. tax)	€75	€60 – 100
Days invoiced / month (cruising)	10	6 – 14
Months invoiced / year (year 1)	10	8 – 11
Start-up investment	€1,000	€800 – 2,500
Annual operating costs	€2,000	€1,500 – 4,000
Safety cash	€3,000	2 to 4 months of costs

Calculation reference points:

- monthly cruising turnover $\approx \text{DR} \times \text{days}$ (standard reference: €4,500);
- target annual turnover $\approx \text{DR} \times \text{days} \times \text{months}$ (standard reference: €45,000);
- initial need $\approx \text{investment} + \text{operating costs} + \text{cash}$ (standard reference: €6,000).

These parameters are dated form: rates, ranges and thresholds are revised. The logic, for its part, does not change — low investment, critical point on start-up cash, the project leader's income secured during the ramp-up.

[ENTREPRENEUR SECTION] — The Candidate's Setting

Parameter	Value [...]
DR / HR	[]
Days / month; months / year	[]
Investment / operating costs / cash	[]

Application File — Apprentice Data Artisan

Section 7 — Financial Forecasts

Part III of the file

1. Regulatory Framework (2026)

[COMMON BASE]

Data applicable to the French micro-enterprise regime for the provision of services (BNC/BIC, the tax categories of non-commercial and commercial profits), to be kept up to date.

Threshold	Amount	Effect
Micro-enterprise turnover ceiling (services)	€83,600	Exceeded two years running → the actual-profit regime (<i>régime réel</i>) the following year
VAT exemption — base threshold	€37,500	Exceeded → loss of the exemption on the following 1 January
VAT exemption — increased threshold	€41,250	Exceeded → liable for VAT from the moment it is exceeded
Social contributions (BNC, order of magnitude)	~22% of turnover	On turnover collected

The two thresholds — micro-enterprise ceiling and VAT exemption — are independent: an activity can remain a micro-enterprise while becoming liable for VAT. The artisan’s steering tool anticipates this case (see Section 8).

2. Three-Year Income Statement

[COMMON BASE]

Three financial years: **launch** (ramp-up, day/hour mix), **consolidation** (cruising speed, recurring share), **change of scale** (higher-value projects, recurring support). The trajectory aims at a cruising income of the order of magnitude fixed by the Parameter Bar (Section 6), reached progressively, then a growing share of recurring income from support, decoupled from direct working time.

Crossing the VAT exemption threshold, while remaining under the micro-enterprise ceiling, is a normal and anticipated situation: it triggers the invoicing of VAT without leaving the regime.

[ENTREPRENEUR SECTION] — to be completed

The candidate establishes their three-year income statement by setting the parameters of the Bar (Section 6) for their area.

Item	Year 1 [..]	Year 2 []	Year 3 []
Total turnover / costs / result	[]	[]	[]

3. Monthly Cash Plan — Year 1

[COMMON BASE]

In a craft with low investment, the risk is not tied-up capital but the **cash gap** at start-up: costs run from the first month, assignments ramp up progressively. The plan checks that cash never becomes negative. The day/hourly mix of the first months secures income while the craft assignments ramp up. From year 2, the monthly plan serves to anticipate the crossings of thresholds rather than to guard against a risk of running out.

[ENTREPRENEUR SECTION] — to be completed

The candidate sets out their monthly cash plan for year 1 (starting cash, receipts, contributions, operating costs, cumulative cash) and checks that cash remains positive every month.

4. Simplified Forecast Balance Sheet

[COMMON BASE]

The balance sheet of the artisan as a micro-enterprise is light: few fixed assets, cash that builds up; on the liabilities side, equity fed by the personal contribution and the results, little or no debt.

In a micro-enterprise, the owner's pay is not a classic deductible cost: the result before pay constitutes the project leader's disposable income. A simplified representation for the purposes of the file.

[ENTREPRENEUR SECTION] — to be completed

The candidate presents their simplified forecast balance sheet (end of year 1) on this same pattern.

5. Summary of Viability

[COMMON BASE]

A robust and low-risk profile: low initial financing (a few thousand euros); cash secured from the first financial year by the invoicing mix; target income reached at cruising speed as the ramp-up proceeds; crossings of tax thresholds anticipated and steered; transition to a recurring income that installs a lasting activity — and it is this sustainability, not an amount of turnover, that opens the move to the degree of Journeyman.

The residual risk is commercial (building up the order book of assignments), mitigated by the sponsorship and the handing on of clientele provided for in the structure of degrees.

Application File — Apprentice Data Artisan

Section 8 — Technical Note

Part III of the file

1. The Innovation: A Craft, Not a Product

[COMMON BASE]

The innovation of the data craft is not technological: it rests on no patent and no material breakthrough. It is an **innovation of method and of stance** — the creation of an intermediate craft that did not exist, positioned between the data industry (which processes in bulk) and very small structures (which are excluded from it).

This nature grounds the solidity of the project: the innovation does not go stale with technologies. Tools change; the craft — drawing accurately, making legible, making autonomous — remains. Hence the rigorous distinction between a **lasting substance** (the stance of referent, the accuracy of the drawing, responsibility for the work) and a **dated form** (tools, languages, platforms, regulations). Training, the contract and the assessment of the degrees rest on the substance; they do not suffer from technological turns.

2. The Procedure

[COMMON BASE]

Three gestures.

Modelling before coding: “speaking the client’s craft”, distinguishing the heart of the craft (where computing dictates nothing) from the support

matrix (automatable), modelling the matrix to free the heart of the craft.

Drawing to fit the need: locating the optimum between under-drawing and over-engineering, to be set again at each assignment.

Delivering a legible and reversible work: documented, understood by the client, signed, and one over which they can take back control at any moment.

Development proceeds in stages — immersion (vital base), adjustment (the client gets used to it and identifies their real needs), expansion (modules added if the need justifies it).

[ENTREPRENEUR SECTION] — Technical Form

[The candidate's stack, tools, architecture.]

Standard projection. AI-assisted development; proven and documented architectures for maintainability; mobile steering application, optimized for low volumes and mobility.

3. The Example Product: The Steering Application

[COMMON BASE]

The steering application is the typical embodiment of the work, with the status of an illustration and not of a definition: another artisan will deliver another work. It gives the business owner back **a hold on their trajectory**: it does not remove the flow that overwhelms them, it makes practicable the share that falls to them.

Substantive functions. **Delegation of the tasks that do not call on them:** automating or preparing what is not the heart of the craft, freeing time, lightening the mental load. **Steering through clear indicators:** consolidating the activity into simple signals, rather than delivering an undecipherable raw mass. **Anticipation of thresholds:** anticipating the crossings (VAT, ceiling) and proposing the arbitration — the threshold is not undergone, it is steered.

The two sides, named. The artisan tells the truth, including what a salesperson would keep quiet: the tool brings a real benefit (time, lucidity, serenity) but involves a trade-off — delegating the processing of a datum is moving a little away from it. The safeguard is inscribed in the design: the tool tends the business owner's capacity to read, it never dispenses them from it.

[ENTREPRENEUR SECTION] — Case of Application

[One or two concrete cases in the candidate's area.]

Standard projection. Stock management for an artisan: replacing a forgotten notebook with a mobile interface where each movement updates a state indicator. The artisan no longer “fills in a table”, they have an up-to-date and legible inventory.

4. The Ecosystem and the Horizon

[COMMON BASE] — Power through Federation

The artisan alone weighs nothing in the data economy; the mesh does: the effect is worth something only when aggregated. The horizon is the integration of very small structures into sectoral data spaces, via a sovereign marketplace where the artisan serves as a technical bridge.

Four substantive clarifications. **A horizon, not a resource:** commercial monetization is built, it does not pre-exist; short-term income comes from assignments. **Giving the capacity, then the choice:** very small structures are excluded from this economy for want of capacity; the artisan gives it to them, after which their participation becomes a choice. **Federating is not governing:** aggregation produces power, not automatically wisdom; governance belongs to a collective arbitration. **Probity of what circulates:** a projected datum is not a measured datum; if it circulates, its status is flagged.

[COMMON BASE] — Sovereignty and Sobriety

Processing as close as possible to the source (edge, local-first): the raw datum does not have to leave the business, and the artisan ensures the quality of what goes into the machine and the legibility of what comes out of it. Short loop, right volume: fewer data to process, less energy, more speed. *(This section joins the TRACE programme — pieces I.1 and I.2.)*

[ENTREPRENEUR SECTION] — Partners Sought

[Local authorities, networks, R&D centres, technical partners in the area.]

5. Impact

[COMMON BASE]

Economic: equipping structures deprived of steering; creating a reproducible craft — a body of trained and sponsored artisans meshing the territory; in time, and still to be built, a source of ancillary income through realizing the value of data in a sovereign way.

Social: digital inclusion (giving the capacity to enter the game); democratic responsibility (an artisan who can be held to account, where an anonymous system answers for nothing); keeping the link with the field through the model of degrees.

Environmental: digital sobriety (right drawing, right sizing); material durability; a short data loop.

[ENTREPRENEUR SECTION] — Expected Local Impact

[Hoped-for effects in the candidate's area.]

6. Contractual Commitment

[COMMON BASE] — *serves as a contract*

By submitting this file to the federating body, the candidate commits to practising in accordance with the substance of the craft, and in particular to:

- 1. hold the **stance of referent** — making autonomous, never dispossessing;
- 2. respect the **test of recurrence** — guaranteeing at all times the reversibility and the autonomy of the client;
- 3. draw to fit the **right need** — neither blind nor over-engineered;
- 4. **answer for their works** — localized and owned responsibility;
- 5. **tell the client the truth** — naming the two sides, not circulating a projected datum as a measured datum;
- 6. **tend the client’s capacity to read** — the tool makes more capable, it does not dispense;
- 7. take part in the **community** — accepting sponsorship, contributing to the circulation of information, transmitting in their turn;
- 8. **approach the client through real gain**, not through constraint — proposing a genuine benefit, not the avoidance of a penalty.

In return, the federating body provides the **training for the Apprentice degree, sponsorship by a Journeyman, and membership of the network**, opening the itinerary towards the degree of Journeyman according to the arrangements of Section 5.

[ENTREPRENEUR SECTION] — Acceptance

Field	To be completed
Surname, first name	[...]
Date	[...]
“Read and approved”, commitment to the common base	[...]

Strategic Analysis of the Deployment

Strengths, Risks and Current Situation of the TRACE Programme

Part IV of the file

This analysis concerns the **deployment model** — the climb through the degrees, the federating structure, the start-up — not the substance, established elsewhere. It names the strengths and the risks without complacency, and gives for each risk how it is handled. It is an assessment of maturity: a programme that knows its points of tension and has already addressed them.

The Current Situation

Four dated facts of 2025-2026 govern the reading of the market.

The adoption of AI in very small structures doubled in a year, but use remains superficial — generating text and images far more than automation or steering. The gap between this gadget use and real steering is the space the artisan aims at. The need for support and training is explicitly formulated by the structures themselves, which note their lack of internal competences: the demand does not have to be created, it has to be captured. The cyber threat has reached the fine mesh — more than a third of small structures have suffered an incident. The movement for digital sovereignty is carried politically and funded: it is a deep wave, not a fashion.

The horizon of monetizing the datum (Data Act, sectoral data spaces) is real but distant: these spaces remain oriented towards industry and their economic models are still being built. The programme treats it for what it is — a sovereign dynamic to be brought about, not a short-term income.

Strengths

A substance that does not go stale. Training and the contract rest on the substance, not on the tools. In a sector where everything goes stale fast, a base that does not age is a lasting advantage.

Moving up a degree through sustainability. Making the move conditional on a sustained activity, attested by an obligation of result in the craft, aligns recognition with the value really created, avoids the bureaucracy of certification, and makes the apprentice experience what they sell.

A low need for capital. A few thousand euros are enough to launch a workshop. The barrier to getting started is minimal, which makes meshing and replication easier.

The handing on of clientele as a built-in engine. The journeyman who hands on their basic clientele to their apprentice, while moving upmarket themselves, solves in a single gesture the apprentice's commercial start, the journeyman's rise in value and the loyalty of the network.

A reserve of talent that can be mobilized. There is a pool of digital professionals who can switch to a data micro-enterprise and quickly prove themselves. The model does not train from zero.

Risks and How They Are Handled

Starting the structure and the first journeymen. The network rests on sponsorship by journeymen; at launch, there are none. *Handling:* an explicit phase 0 directly recognizes, through their portfolio and their experience, a circle of founding journeymen — first sponsors and first masters in the making. The system thus starts through something other than its nominal mechanism.

Tempo. Established actors (the consular chambers — of commerce, of trades, of agriculture —, chartered accountants, software publishers) and mass-market AI progressively occupy the ground of digital support. *Handling:* differentiation through the stance of referent and modelled tailor-made work is demonstrated by the work, not by assertion; a public register of achievements documents the proof. The niche of real steering remains largely unoccupied, and the window is open now.

Commoditization through AI. The tool that the artisan sells progressively becomes accessible to the end client through general-purpose AI. *Handling:* what is not delegated to AI without remainder is answering for the arbitrations (what to draw, what lies, what is worth something) and

for the work. Specialization by trade sector — where the value lies in understanding the gesture, not in the technique — opens a gap that neither AI nor the generalist consultant fills.

The solo artisan's non-craft load. The artisan runs the risk of the overdrive they treat in their clients. *Handling:* this is the reason for being of the cooperative, which pools the back office and organizes an operational delegation (sales, follow-up, quotes) — a net gain for the artisan and a source of jobs for the territory.

The regulatory risk on micro-enterprise status. The model starts on the micro-enterprise, a status liable to change. *Handling:* the model survives the crossing — the move to a company is a planned stage of the trajectory, and the criterion of degree, grounded in sustainability and not in status, does not depend on it.

Summary

The deployment model rests on an accurate substance and meets a favourable current situation: the demand exists, it is formulated, and the wave of sovereignty carries it. Its points of tension are the start-up and the tempo — questions of sequence and execution, handled by three structuring decisions: **founding the cooperative** to give shape to the federating body and pool the network's matrix; **coming in through the real gain promised** to the client, not through constraint; **starting with a circle of founding journeymen** so that the system gets going.

One coherence runs through the whole: almost every answer to the risks is the application, to the network itself, of the gesture that the artisan applies to their clients — pooling the matrix to free the heart of the craft, proving by the work, telling the truth about the horizons, staying sober and accurate. A deployment faithful to this principle is its own demonstration: the data craft deploys as an artisan works.

Annex — Filiation

From Processual Ontology to the Enterprise Model

Annex A of the file

This annex establishes the lineage of the programme: how the data artisan proceeds directly from the theoretical work on processual ontology. It is addressed to whoever wants to check that the action rests on a substance, and not the reverse.

The Thread

The TRACE programme is not a business idea dressed up in theory after the fact. It descends from a conceptual work that establishes what the datum is — a processually constituted entity, made by inscription, often put into circulation by transport, and actualized only through reading. From this ontology, the craft of the data artisan is deduced: where whoever holds a datum does not know how to interpret it, it remains constituted, but stays mute for them; for it to be read, a referent able to question it about its origins and its destinations is needed; this referent, at the scale of very small structures, does not exist — it is to be instituted. The artisan is the answer to a lack that the theory identifies.

The Concepts, and Their Embodiment

Each feature of the craft proceeds from an established concept.

The stance of referent — making autonomous, not dispossessing — is the direct translation of the role that the theory assigns to whoever makes the datum legible. It governs the charter, the test of recurrence, the safeguard against excessive delegation.

The right need is the optimum between under-drawing and over-engineering: neither the blind tool, nor the drowned tool. It grounds the artisan's sobriety and their criticism of "Swiss-army-knife" software.

The systemic leap — the freed time that goes to what counts when one delegates what does not call on one — is the central value proposition of the steering application.

Accomplished transport — which is accomplished only if the reader's share is practicable — grounds consolidation: one does not deliver a raw datum to someone who has neither the time nor the corpus to decipher it.

Power through federation — the individual hold that is worth something only when aggregated — grounds the collective horizon: the sovereign marketplace, the mesh, and technically federated learning.

The trace as origin and as limit — what becomes a datum through the work, and what alone remains of the dead datum — gives the programme its name and its reason for being: making sure that the territory's datum does not remain mute for those who produce it.

The Status of the Enterprise Model

The enterprise model is not a proof of the substance — a substance is not proved by a case. It is its **first dated form**: the craft that the theory makes thinkable, this model makes practicable. As such, it has the status that the theory reserves for its own illustrations: shedding light on the substance through a form of the present, without adding anything to the base, and accepting its own lapse.

The criterion of success follows from this: if the tool that this model illustrates is one day outdated but the craft exists and meshes the territory, the substance will have held and the form will have gone stale — exactly what is asked of a first dated form. Observing the real leads to modifying it: such is the thesis, and the programme puts it to the test.

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*.

- **TRACE.** The name of the programme is an acronym that holds in English: *Territory, Resilience, Autonomy, Coordination, Enterprise* (*Territoire, Résilience, Autonomie, Coordination, Entreprise*). The doctrine glosses the senses of the French word *trace*; the translation gives their English counterparts (*to leave a trace, to follow the trace*,

to trace the trajectory). Elsewhere, *trace* is kept for the mark that the real leaves of itself, and *record* renders its ordinary sense.

- **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.
- **The data artisan** (*l'artisan de la donnée*): the referent whose domain would be the datum itself, a craft yet to be created — the file proposes to create it (*a new craft*); the **data craft** (*artisanat de la donnée*) is that craft. Its degrees are **apprentice, journeyman, master**.
- **drawing / to draw** (*prélèvement, prélever*): the gesture of drawing from the flow; *draw* is kept for this gesture. **Accuracy** renders *justesse*.
- **heart of the craft; support matrix** (*cœur de métier; matrice de soutien*): the client's know-how, which computing does not touch, and the automatable tasks around it. **Immersion, adjustment, expansion** are the three stages of development.
- **mesh; link in the mesh** (*maillage; maille*): the network of local operators and each structure it reaches. **Power through federation** and **individual hold** render *puissance par fédération* and *prise individuelle*.
- **project leader** (*porteur de projet*): the person who carries the project; *carrier* is kept for what carries a datum.
- **French institutions and schemes.** They keep their French name, with an English rendering (the *SCIC*, cooperative society of collective interest; the *RAPID* scheme; the Defence Innovation Agency; the Directorate General for Enterprise). The tax terms of the micro-enterprise regime (*BNC/BIC*, VAT exemption thresholds) are those of French law in 2026.
- **Figures.** Amounts are written in the English way (€45,000); *DR* and *HR* render *TJ* and *TH* (day rate, hourly rate).
- **Titles.** *Tried by the Flow* renders *À l'épreuve du flux*; this volume is *The TRACE Programme*.

The TRACE Programme

Presentation File

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This file proposes a programme: *to give territories a new craft — the data artisan — and to organize it as a sovereign and resilient network.*

It rests on a tested theoretical conviction and on a precise reading of the current situation. The datum is not an inert object that one stores; it is a processually constituted entity, whose value, potential from its making onwards, is realized only through reading. Without reading, it remains constituted, but not actualized. Now the bulk of the economic fabric — very small structures, of one to a few people — produces a growing mass of data that it knows neither how to read, nor how to protect, nor how to realize the value of. These data remain mute for it: illegible, vulnerable, unexploited. It is a dead loss for the entrepreneur, and a flaw for the sovereignty of the territory.

The TRACE programme answers this loss. It trains and federates local operators able to go down to this fine mesh, to structure the datum at the source, to make it legible and usable, and to secure it without ever dispossessing its producer of it. What these operators do for the civilian sphere — making structures autonomous and resilient — directly serves the digital sovereignty of the territory.

The file goes from substance to action without a break: from an ontology of the datum, it deduces a craft; from the craft, an organization; from the organization, a pilot enterprise that acts on reality from today. This is the very movement it defends: *observing the real leads to modifying it.* Modifying what exists for the common good: such is the intention carried here.