

# Software Requirements Specification (SRS)

**Project:** CodFleet App (European Region)

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Here’s a properly structured **Index with page numbers** for your CodFleet SRS PDF, based on the content you uploaded:

## Index – CodFleet App (European Region) SRS v1.0

Section	Title	Page
Cover Page	Project Details (Version, Date, Prepared by)	1
1. Introduction		2
1.1	Purpose	2
1.2	Intended Audience	2
1.3	Intended Use	2

1.4	Scope	3
1.5	Definitions & Acronyms	3
<b>2. Overall Description</b>		4
2.1	User Needs	4
2.2	Assumptions & Dependencies	4
<b>3. Functional Requirements</b>		5
3.1	User Roles & Authentication	5
3.2	Company Features	6
3.3	Freelancer Features	7
3.4	Matching & Search	8
3.5	Payment & Contract	8
3.6	Communication	9
<b>4. External Interface Requirements</b>		10

4.1	User Interface	10
4.2	Hardware & Software Interfaces	10
<b>5. Non-Functional Requirements</b>		11
5.1	Performance	11
5.2	Security	11
5.3	Usability	12
5.4	Reliability & Availability	12
<b>6. Admin Panel</b>		13
<b>7. Future Enhancements (Phased Roadmap)</b>		14
<b>8. Dependencies</b>		15
<b>9. Appendix</b>		16
9.1	Core Entities (Simplified)	16
9.2	Key Legal Controls (Snapshot)	17

9.3	KPIs (Phase Gates)	18
9.4	Gaps / Improvements Needed	18
<b>Acceptance Criteria</b>	High-Level Criteria	19
<b>CodFleet Requirements Matrix</b>	Functional, Payment, Legal, NFRs	20
<b>Legal Risk Matrix</b>	Law → Risk → Control Mapping	22

## 1. Introduction

### 1.1 Purpose

Build a compliance-secure workforce **marketplace + payment agent** that connects companies to **pre-verified independent freelancers** (starting Finland → Nordic/EU), with **escrowed pass-through payments, documented contractor compliance**, and an **upskilling pathway**. CodFleet is **not an employer** and **not a staffing agency**.

### 1.2 Intended Audience

Founders/execs, product & engineering, compliance/legal counsel, security & data protection officers, operations, external auditors, government liaison partners, and enterprise clients.

### 1.3 Intended Use

Define functional, legal, security and performance requirements for a phased delivery (Phase 1–6), serve as acceptance criteria for vendors, and as the baseline for DPIA/SoA (GDPR).

### 1.4 Scope

Web application (responsive) with consoles for **Freelancer, Company, Admin/Compliance, Support, Field Master**, and a **read-only Government Viewer** (upon MOU). Escrowed payment rails (PSP), compliance verification, task posting with **coverage windows** (no shifts), matching, invoicing, and upskilling.

### 1.5 Definitions & Acronyms

- **Freelancer** = independent contractor with Business ID (Y-tunnus).
  - **Company** = client posting tasks.
  - **PSP** = Payment Service Provider (licensed in EU).
  - **KYC/AML/PEP** = identity & sanctions screening.
  - **GDPR/DPIA/DPA** = EU privacy regime / impact assessment / data processing agreement.
  - **YEL** = self-employed pension; **TyEL** = employee pension (not applicable to freelancers).
  - **TES** = sectoral collective agreement (reference only; CodFleet not an employer).
  - **Coverage Window** = voluntary time window a freelancer chooses to be available (no scheduling control).
  - **Pass-through** = client funds held in escrow, then forwarded to freelancers; CodFleet retains only its service fees.
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## 2. Overall Description

### 2.1 User Needs

- **Companies**: fast access to **pre-verified**, legally eligible freelancers; one auditable invoice; contractor-obligations proof.
- **Freelancers**: legal work opportunities, **escrowed**, **on-time payouts**, transparent fees, document vault, optional upskilling.
- **CodFleet**: automated compliance, audit trails, risk flags, fair matching, dispute workflows.
- **Government**: optional read-only access to compliance dashboards (upon request/MOU).

### 2.2 Assumptions & Dependencies

- GDPR compliance & EU data residency.
- Payments via EU-licensed PSP (e.g., Stripe/Adyen/Paytrail) **escrow accounts**.
- Identity/document verification via KYC vendors (e.g., Veriff/Onfido) and **Suomi.fi/eIDAS** where available.

- Registry checks: **YTJ** (Business ID), **VERO** (tax status APIs/exports), optional Migri status (consent-based), insurance proof (policy docs).
- Initial focus: **Finland** (Phase 1–3) then Nordic/Baltics (Phase 4–6).

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## 3. Functional Requirements

### 3.1 User Roles & Authentication

#### Roles

- Freelancer
- Company: Org Admin, Hiring Manager, Finance
- CodFleet: Admin, Compliance Officer, Support Agent, Field Master (ops)
- Government Viewer (read-only; optional, gated by MOU)

#### Auth

- Email + OTP/password; optional **MFA** (TOTP/SMS).
- SSO (Google/Microsoft) optional for companies.
- eID (Suomi.fi/eIDAS) for high-assurance actions (contracting, bank updates).
- RBAC with least-privilege.
- Session management via JWT + short-lived tokens; refresh rotation.

#### Freelancer KYC & Compliance Gate (hard block)

- Mandatory: passport/ID, residence/visa, **Y-tunnus**, **Tax number/certificate**, **YEL** status, **accident insurance** policy, bank IBAN, consent to data sharing with authorities when legally required.
- Status engine: **Pending** → **Verified** → **Active** (or Rejected/Hold).
- **Monthly “green light” check**: prior-month tax/YEL/insurance receipts uploaded before payout.

### 3.2 Company Features

- Org profile, legal entity details, billing info, DPA acceptance.
- **Create Tasks**: title, description, **coverage window(s)**, location, skills/certifications, language, PPE/safety, sector tag, **rate range** (CodFleet suggests market rate; company sets, freelancer accepts).
- **Compliance Checklist** auto-attached to each task (Contractor's Obligations Act proof pack).
- Matching: shortlist of eligible, verified freelancers only.
- Invite / accept / cancel (with fair-use policy).
- **Escrow invoice** generation (pre-fund in advance or rolling terms).
- Approve completions (deliverable-based or time-boxed window completion).
- Reporting: spend, fulfillment, compliance proof export (PDF/CSV).
- Messaging with freelancers (monitored for safety; no shift control).
- Dispute creation, evidence upload, structured resolution SLAs.

### 3.3 Freelancer Features

- Profile: bio, skills, languages, location radius, certifications (e.g., Hygiene, Hot Work, Forklift), preferred coverage windows.
- Document Vault: ID, visa, Y-tunnus, YEL proof, insurance, tax cert; **expiry reminders**.
- Discovery: browse/apply to tasks; **no assignment**—only volunteer/accept.
- Availability: choose/update **coverage windows**; request **swap** (peer replacement) if needed.
- **Payouts**: wallet view, earnings, CodFleet fee shown, escrow status, payout schedule; invoices auto-generated by the platform in freelancer's name to CodFleet.
- **Compliance meter**: monthly status (Green/Amber/Red) with required actions.
- **Upskilling**: course catalog, enrollments, certificate upload, skill badges.

### 3.4 Matching & Search

- Filters: legal eligibility, documents verified, skills/certs, distance, language, past ratings, coverage windows overlap, **hour-cap guard** (e.g., students 30h/week).
- Ranking: compliance first, then proximity/skills/fairness.
- Fairness & explainability: show why a freelancer was eligible/matched (non-discriminatory).

### 3.5 Payment & Contract

- **Payment Flow (pass-through)**
  - Company accepts candidates → system issues **escrow invoice** to Company (PSP).
  - Funds settle in escrow ledger (client sub-account).
  - Upon completion/confirmation, CodFleet forwards payouts to freelancers from escrow.
  - CodFleet retains **service fees** (subject to VAT) and issues invoice to Company for **client-side fee**.
  - Freelancer invoice (platform-generated) to CodFleet; payout = gross task value – **Freelancer service fee (X% delivery / X% skilled)**.
- **Contracts**
  - Platform **ToS + Service Agreement** (Freelancer ↔ CodFleet) stating **independent contractor** status; no shifts, no wage setting, no exclusivity.
  - **Company MSA** (Company ↔ CodFleet) with DPA, contractor-obligations clause, escrow terms, dispute SLA.
  - **Task Confirmation**: scope, rate, coverage window(s), safety, docs list.
- **Taxes**
  - CodFleet charges **VAT on CodFleet fees** (e.g., 24% in FI).
  - Freelancer tax/YEL/insurance remain freelancer's responsibility; monthly proof upload is a payout prerequisite.
  - System flags **VAT threshold** crossings for freelancers.

### 3.6 Communication



- In-app messaging, email/SMS/push notifications (task invites, doc expiry, payouts).
  - Broadcast notices (policy, safety).
  - Audit trail of all communications.
  - **No performance control** language; messages are informational & safety-only.
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## 4. External Interface Requirements

### 4.1 User Interface

- Responsive web (desktop-first; mobile optimized).
- **Languages:** EN & FI at launch; SV/ET/EE optional later.
- WCAG 2.1 AA accessibility.
- Branding: clean Nordic UI; CodFleet red accents; compliance trust badges.

### 4.2 Hardware & Software Interfaces

- **PSP** (escrow sub-accounts, payouts, reconciliation webhooks).
  - **KYC** providers (OCR/face match, liveness).
  - **Suomi.fi/eIDAS** for high-assurance actions (optional).
  - **YTJ** lookup (Business ID); **VERO** tax number/validation (API or periodic export); **Insurance** proof (policy upload/API when available).
  - Cloud email/SMS (SendGrid/Twilio), object storage (EU), monitoring (APM), logging (SIEM).
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## 5. Non-Functional Requirements

### 5.1 Performance

- P95 page load < 2.5s (EU).
- Match generation < 3s for 5k eligible freelancers.
- Reconciliation jobs complete within T+1 business day.

### 5.2 Security

- GDPR by design; **EU data residency**.
- Encryption **at rest (AES-256)** & **in transit (TLS 1.2+)**.
- RBAC, MFA for privileged roles, IP allow-listing for Admin/Compliance.
- **Audit logs**: all auth, document, payout, contract actions (immutable).
- **DPIA & RoPA** maintained; DPAs with all processors.
- Secrets in HSM/secret manager; OWASP Top-10 controls; rate limiting; WAF; DDoS.
- Incident response runbook (72-hour breach notification readiness).

### 5.3 Usability

- Guided onboarding, clear status (Pending/Verified/Active), tooltips, checklists.
- Self-serve document re-upload, track progress to payout.

### 5.4 Reliability & Availability

- 99.9% uptime target.
- Backups daily (RPO ≤ 24h), DR RTO ≤ 8h, multi-AZ.
- Blue/green deploys, featuring flags.

## 6. Admin Panel

- **User management** (search, status changes, KYC view, locks).
  - **Document review queue** (4-eyes approval for exceptions).
  - **Compliance dashboard**: green/amber/red by user & company; exportable proof packs.
  - **Tasks oversight**: abuse flags, cancellations, fill-rate metrics.
  - **Payments**: escrow balances, payout queues, fee capture, chargeback handling.
  - **Disputes**: triage, evidence, resolution outcomes, templates.
  - **Content & CMS**: policies, course catalog, announcements.
  - **Reporting**: finance, ops KPIs, authority reports.
  - **Government Viewer provisioning**: read-only scopes per MOU.
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## 7. Future Enhancements (Phased Roadmap)

### Phase 1 (Weeks 0–6) – Launch Web Presence & Intake

- Marketing site, About/Legal.
- **Freelancer & Company signup**, document collection, basic verification, counters.
- Manual payouts (no escrow yet). KPI: 500 signups, 50 verified.

### Phase 2 (Weeks 7–12) – Core Marketplace

- Task posting with **coverage windows**, eligibility filters, matching.
- In-app messaging, notifications.
- Admin review queues, monthly compliance proof uploads. KPI: 100 active freelancers, 5 companies.

### Phase 3 (Weeks 13–20) – Escrow & Invoicing

- PSP escrow sub-accounts, invoice generator, automated payouts (T+1/T+7).
- **Pass-through ledger**, fee capture, VAT invoices. KPI: 1st month €50k GMV.

### Phase 4 (Weeks 21–28) – Compliance Automation

- eIDAS for high-assurance events; VERO/YTJ integrations (API/exports).
- Hour-cap guardrails (student 30h/week), visa expiry auto-freeze.
- Government Viewer beta. KPI: 90% green monthly compliance.

### Phase 5 (Weeks 29–40) – Upskilling & Sector Depth

- Course catalog, badges, client-required cert mapping.
- Sector modules (construction/logistics/cleaning).
- SLA & safety packs per sector. KPI: 25% freelancers upskilling.

### Phase 6 (Weeks 41–60) – Scale & SaaS Option

- Multi-country configs (VAT, languages), SOC 2 Type I prep.
- Offer **Compliance-as-a-Service** white-label to platforms. KPI: 3 enterprise MOUs.

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## 8. Dependencies

- Cloud: AWS (eu-north-1/eu-central-1) or GCP in EU; object storage + RDS/Cloud SQL.
- PSP: Stripe/Adyen/Paytrail (escrow/marketplace payouts).
- KYC: Veriff/Onfido; Address/IBAN validation.
- Email/SMS: SendGrid/Twilio.
- Monitoring: Datadog/New Relic; SIEM (Elastic/Splunk).
- Map/Geo: Mapbox/Google Maps (radius, heatmaps).

## 9. Appendix

### 9.1 Core Entities (simplified)

- **User**(id, role, contact, MFA, status)
- **FreelancerProfile**(user\_id, skills[], certs[], radius, availability[])
- **ComplianceDoc**(user\_id, type, number, issuer, expiry, file\_url, status)
- **Company**(id, legal\_name, reg\_no, VAT, billing, DPA\_flags)
- **Task**(id, company\_id, sector, description, location, rate\_range, coverage\_windows[], required\_docs[])
- **Match**(task\_id, freelancer\_id, status)
- **Contract**(party\_a, party\_b, terms\_hash, signed\_at, version)
- **EscrowLedger**(company\_subacct, task\_id, amount\_gross, fees, VAT, payouts[])
- **Invoice**(issuer, recipient, lines[], VAT, status)
- **Dispute**(task\_id, party, reason, status, outcome)
- **AuditLog**(actor, action, entity, timestamp, hash)

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### 9.2 Key Legal Controls (snapshot)

- **No shifts / no wage setting / no exclusivity** → only coverage windows & freelancer-accepted rates.
- **Monthly proof-before-payout**: tax/YEL/insurance receipts.
- **Pass-through escrow**: CodFleet acts as payment agent, not payroll.
- **Contractor Obligations Pack** downloadable per task/company.
- **Hour-cap enforcement**: students 30h/week (average).
- **Automated freezes**: visa expiry & document expiry trigger account suspension.

- **Comms & audit:** immutable logs; export-ready for AVI / VERO / Migri upon lawful request.
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### 9.3 KPIs (Phase gates)

- Verification rate
  - Fill-rate
  - Time-to-fill
  - Payout timeliness
  - Green-status % (all docs validated)
  - Dispute rate
  - Authority requests SLA (<5 days)
  - Churn
  - NPS (Net Promoter Score)
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### 9.4 ⚠️ Gaps / Improvements Needed

#### 1. Regulatory Alignment

- Add explicit mapping of AVI (Labour Inspectorate), Verohallinto (Tax), Migri (Immigration), Contractor's Obligations Act.
- Insert **Legal Risk Matrix**: *Law* → *Potential Risk* → *CodFleet Control Measure*.

#### 2. Upward Path (Skill Development)

- Add features for course linking, certification uploads, and skill-based job matching.
- Note integration with **TE Offices/VET colleges** for legitimacy.

#### 3. Payment System

- Clarify workflow: *Freelancer invoices CodFleet → CodFleet invoices client → Escrow payout.*
- Specify PSP integration (Stripe, Paytrail, Holvi).

#### 4. Company Compliance Proof

- Auto-generate **compliance pack** (Visa, Y-tunnus, Tax ID, YEL, Insurance) attached to every invoice.
- Ensures clients meet obligations under the Contractor's Obligations Act.

#### 5. Risk & Abuse Controls

- Add **fraud detection, misuse alerts, violation flags, blacklist system, misuse reporting.**
- Include PR/union/media **crisis-handling protocols.**

#### 6. Future Roadmap

- Add **Govt Console** for data-sharing with Migri, Vero, AVI.
- Position as proactive compliance infrastructure for long-term credibility.

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## Acceptance Criteria (high-level)

- **Legal posture:** All UIs, contracts, and flows avoid employer-like control; ToS/MSA approved by counsel before Phase 2.
- **Compliance gate:** Users cannot become Active without a full document set; monthly proof locks payouts if missing.
- **Payments:** Funds flow only via PSP escrow; CodFleet retains fees + VAT; net payouts auto-reconciled.
- **Privacy:** DPIA complete; DPAs signed; data residency enforced; access logged.
- **Uptime & Security:** ≥99.9% uptime; MFA for admins; penetration test before Phase 3 cutover.

## CodFleet Requirements Matrix

ID	Requirement	Category	Priority	Acceptance Criteria	Phase
FR-001	User roles: Freelancer, Company, Admin, Support, Field Master, Govt Viewer	Functional	High	Each role created with RBAC permissions	Phase 1
FR-002	Freelancer KYC: Passport/ID, Visa, Y-tunnus, Tax ID, YEL proof, Insurance, IBAN	Functional	High	Cannot activate profile unless all docs uploaded and verified	Phase 1
FR-003	Monthly compliance proof: tax/YEL/insurance receipts before payout	Functional	High	System blocks payouts if proof not uploaded	Phase 2
FR-004	Company console: Create task (coverage windows, description, rate, sector, safety reqs)	Functional	High	Task creation flow available; task contains compliance checklist	Phase 2
FR-005	Escrow invoice issued to company before task start	Payment	High	Funds visible in escrow ledger; payout blocked until confirmation	Phase 3
FR-006	Freelancer invoice auto-generated (platform in freelancer's name)	Payment	High	Freelancer can download PDF invoice; visible in wallet	Phase 3



FR-007	CodFleet invoices company for service fees (VAT applied)	Payment	High	Company receives PDF invoice; reconciles with PSP webhook	Phase 3
FR-008	Hour cap enforcement: 30h/week for students, 160h/month for full-time	Legal Guard	High	Auto cutoff when cap hit; task not assignable beyond	Phase 4
FR-009	Visa expiry auto-freeze	Legal Guard	High	System freezes account if visa expiry date < today	Phase 4
FR-010	Company invoice = one consolidated pack (all freelancer docs attached)	Compliance	High	Company can download Contractor Obligations Pack (PDF)	Phase 2
FR-011	AI-assisted matching (optional)	Functional	Medium	System recommends freelancers based on compliance, skills, coverage	Phase 4
FR-012	Coverage windows (not shifts) for freelancer availability	Legal Guard	High	Freelancer selects voluntary windows; system only matches on these	Phase 2
FR-013	Ratings & feedback loop (company ↔ freelancer)	Functional	Medium	Profiles show rating history; <2.5 stars flagged for compliance review	Phase 4

FR-014	Government Viewer console (read-only)	Functional	Medium	Authority account shows compliance dashboards without edit rights	Phase 5
FR-015	Upskilling module (Hygiene, Forklift, Finnish, etc.)	Functional	Medium	Freelancers can enroll & upload certificates; badge shown in profile	Phase 5
FR-016	Dispute workflow (task rejection, fraud, misconduct)	Functional	High	Evidence upload, CodFleet admin triage, SLA resolution within 7 days	Phase 3
FR-017	Messaging + notifications (email/SMS/app)	Communication	High	All critical events (doc expiry, payouts, disputes) trigger notification	Phase 2
FR-018	Multi-language UI (EN, FI at launch; SV later)	UI/UX	Medium	Toggle language in profile; strings translated	Phase 2
FR-019	GDPR compliance: DPIA, RoPA, DPA with PSP/KYC vendors	Security	High	Legal confirmation before go-live; privacy policy published	Phase 1
FR-020	Payment rails: PSP escrow sub-accounts	Payment	High	Escrow accounts created; CodFleet retains service fee; payouts auto-forward	Phase 3

NFR-001	Performance: P95 < 2.5s page load	Non-Functional	High	Monitored in APM; alert if >2.5s	Phase 2
NFR-002	Security: MFA for admins, encryption at rest & transit	Non-Functional	High	Pen-test passed; MFA enforced	Phase 1
NFR-003	Reliability: 99.9% uptime, daily backups	Non-Functional	High	SLA monitoring dashboard available	Phase 2
NFR-004	Usability: Mobile responsive	Non-Functional	High	Tested on mobile browsers; no broken views	Phase 1

## Legal Risk Matrix

Law / Authority	Risk if Ignored	CodFleet Control / Action
<b>Employment Contracts Act (Työsopimuslaki)</b>	Freelancers may be reclassified as employees → liability for wages, holidays, pensions.	CodFleet operates as a <b>marketplace only</b> : no shifts, no wage-setting, no employer obligations. All freelancers contract independently with CodFleet as invoicing agent.
<b>Contractor's Obligations Act (Laki tilaajan selvitysvastuudesta)</b>	Client companies are fined if subcontractors lack valid tax, insurance, or permits.	Every invoice includes an <b>auto-attached compliance pack</b> (Visa, Y-tunnus, Tax ID, YEL, Insurance). Clients automatically get proof of compliance.
<b>Working Hours Act (Työaikalaki)</b>	Students exceeding 30h/week, or freelancers over 160h/month → violation.	Platform auto-tracks tasks → converts to hours. <b>Automatic cut-offs</b> when caps are reached.
<b>Tax Administration (Verohallinto)</b>	Risk of tax evasion, missing VAT/YEL payments.	Mandatory <b>Vero ID verification</b> at registration. Monthly proof of tax/YEL payments uploaded before payouts. Escrow ensures full audit trail.
<b>Immigration Service (Migri)</b>	Expired residence permits or visa abuse.	All freelancers upload valid permits. <b>Automatic expiry alerts + freeze</b> if visa lapses. Optional monthly compliance report to Migri.

<b>Occupational Safety Act</b>	Liability if a freelancer has an accident without proper insurance.	Insurance certificate required at registration. CodFleet validates coverage and flags expiry.
<b>GDPR / Data Protection Act</b>	Mishandling freelancer or client data.	Full GDPR compliance: encrypted storage, role-based access, consent logs, data portability.
<b>EU Platform Work Directive (2025)</b>	Reclassification if 2/7 criteria met (e.g., control over work, exclusivity).	CodFleet avoids all triggers: no shifts, no exclusivity, freelancers free to multi-app. CodFleet = compliance & invoicing facilitator.