TECHNICAL SPECIFICATIONS
Rec+onnect MVP

Version 2.0 | January 2026
Prepared by Akella inMotion

1. System Architecture

1.1 Technology Stack

Layer	Technology	Purpose
Frontend	React + TypeScript	Type-safe UI development
Styling	Tailwind CSS	Utility-first styling
Backend/Database	Supabase (PostgreSQL)	Auth, DB, storage, real-time
Hosting	Vercel	Edge deployment, CI/CD
AI (Primary)	Claude (Anthropic)	JD gen, insights, synthesis
Transcription	Whisper API (OpenAI)	Interview audio to text
Email	Resend	Collaborator invites
Landing Page	Next.js / Vercel	Static site with analytics

1.2 Architecture Overview

The application follows a modern JAMstack architecture:

- **Client Layer:** React SPA on Vercel edge network
- **API Layer:** Supabase Edge Functions for business logic and AI orchestration
- **Data Layer:** PostgreSQL with row-level security for multi-tenant isolation
- **Storage Layer:** Supabase Storage for CVs, recordings, and media
- **Landing Page:** Separate static site deployment on Vercel

2. Database Schema

2.1 Core Tables

organizations

```
id (uuid), name, logo_url, settings (jsonb), created_at, updated_at
```

users

```
id (uuid), organization_id (fk), email, name, role (admin/manager/interviewer), created_at
```

playbooks

```
id, organization_id, created_by, title, status, job_description (jsonb), market_insights
(jsonb), candidate_profile (jsonb), created_at
```

interview_stages

```
id, playbook_id, order_index, name, type, duration_minutes, focus_areas (jsonb), suggested_questions (jsonb), assigned_interviewer_id
```

candidates

```
id, playbook_id, name, email, cv_url, salary_expectation, current_stage_id, status, created_at
```

interviews

```
id, candidate_id, stage_id, interviewer_id, scheduled_at, recording_url, transcript (text), status
```

feedback

```
id, interview_id, interviewer_id, ratings (jsonb), notes (text), pros, cons, recommendation, created_at
```

ai_synthesis

```
id, candidate_id, synthesis_type, content (jsonb), generated_at
```

3. AI Integration

3.1 Claude API Configuration

- **Claude Opus 4.5:** Deep market research (async, up to 60 minutes)
- **Claude Sonnet 4.5:** Quick operations: JD generation, stage creation, feedback synthesis

All AI requests use Zod schemas for JSON validation. Prompts are version-controlled with fallback logic.

3.2 Market Insights Flow

Phase 1 (Immediate): Claude Sonnet returns preliminary data within seconds

Phase 2 (Background): Claude Opus performs deep research, results populate async via polling

3.3 Transcription Pipeline

1. In-app recording via MediaRecorder API
2. Upload to Supabase Storage
3. Edge function sends to Whisper API
4. Transcript stored and linked
5. Claude analyzes for Debrief features

3.4 AI Compliance Module

EU AI Act compliant (text-based only): Divergent Feedback Detection, Vague Response Flagging, Consensus Analysis. No biometric inference.

4. Feature Breakdown by Chapter

4.1 Discovery Chapter

AI Prompt Input (rich text with suggestions), Market Insights (salary, competition, time to hire, availability, skills, trends), JD Generator (AI-generated with style options), Customization (logo, edit, format toggle).

4.2 Process Chapter

Stage List (vertical with badges, expandable), Discipline-Specific (auto-includes relevant assessments), Focus Areas (per-stage with questions), Customization (add/remove/edit stages).

4.3 Alignment Chapter

Candidate Profile (experience, skills, industries), Process Summary (stages, timeline, stakeholders), Panel Guidelines (best practices), Collaborators (invite, assign to stages), Shareable Link (read-only with expiration).

4.4 Debrief Chapter

Candidate Cards (name, stage, status), Recording (in-app MediaRecorder), Transcription (Whisper API), Feedback Form (ratings, notes, recommendation), Compare Feedback (AI synthesis), Access Control (hiring manager + admin only for full access).

5. Landing Page Technical Specifications

Framework: Next.js (static export) or plain HTML/CSS/JS

Hosting: Vercel (separate project from main app)

Domain: Client-provided (e.g., reconnect.io or similar)

SEO Implementation:

- Semantic HTML structure
- Meta tags (title, description, Open Graph, Twitter Cards)
- JSON-LD structured data
- XML sitemap
- robots.txt
- Canonical URLs

Analytics:

- Google Analytics 4 with enhanced measurement
- Event tracking for CTA clicks
- Conversion tracking setup

Performance Targets:

- Lighthouse Performance score: 90+
- First Contentful Paint: <1.5s
- Largest Contentful Paint: <2.5s
- Cumulative Layout Shift: <0.1

6. Security & Compliance

6.1 Authentication

Supabase Auth with email/password and magic link. JWT sessions with secure refresh. Min 8 char passwords.

6.2 Authorization

RBAC: Admin (full), Manager (playbooks/candidates), Interviewer (assigned stages only). RLS policies enforce org isolation.

6.3 Data Protection

AES-256 at rest, TLS 1.3 in transit. GDPR-compliant with right to deletion. Supabase SOC 2 Type II compliant.

7. Infrastructure Cost Breakdown

Service	Low	High	Pricing
Supabase Pro	$25	$25	Flat monthly
Vercel Pro	$20	$20	Flat monthly
Claude Sonnet	$30	$100	$3/1M input
Claude Opus	$20	$100	$15/1M input
Whisper API	$10	$50	$0.006/min
Resend	$0	$20	Free: 3k/mo
TOTAL	**~$105**	**~$315**	**Per month**

Assumptions: Low = ~50 playbooks/mo, ~20 interviews. High = ~200 playbooks/mo, ~100 interviews.

8. Explicit Exclusions

NOT included in MVP (can be quoted separately): Mobile apps (iOS/Android), Calendar integrations, ATS integrations, Custom SSO/SAML, Multi-language support, Real-time collaboration, Custom analytics dashboards, Job board posting, Video platform integration, Background check automation, Payment/billing system.

9. Client Requirements

Week 1: Logo files (SVG/PNG), brand colors, company name, landing page preferences

Week 2: User roles/permissions decisions, CMS requirements

Week 8: 5-10 beta testers, production domain(s) purchased

Post-delivery: API accounts (Anthropic, OpenAI, Resend) with payment methods

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