

GetSoluce - Complete Technical Specification

All-in-one HR Solution for French Multi-Company SMEs

1. Project Overview

****GetSoluce**** is a centralized SaaS HR management platform, specifically designed for French multi-company SMEs (Small and Medium Enterprises).

Important French Context:

- ****SME****: Companies with 10 to 249 employees (French definition)
- ****Multi-company****: A group of companies with multiple distinct legal entities
- ****SIRET****: Unique identification number for French establishments (14 digits)
- ****GDPR****: European regulation on personal data protection

General Architecture:

- ****1 Creator**** (Super Admin): Unique platform owner
- ****N Companies****: Platform clients
- ****N×M Administrators****: HR managers of companies
- ****N×M×P Employees****: Company employees

2. Authentication System and Account Management

2.1 Core Principle

****NO PUBLIC REGISTRATION**** - All accounts are created by invitation only.

2.2 Login Process

Login Interface:

...

GetSoluce Login	
Email: <input type="text"/>	
<input type="button" value="[Send my code]"/>	
No "Sign up" link	

...

Authentication Workflow:

1. **Step 1**: User enters their email
1. **Step 2**: System generates a 6-digit OTP (One Time Password)
1. **Step 3**: Code sent by email (valid for 5 minutes)
1. **Step 4**: User enters received code
1. **Step 5**: Validation and automatic login

Security:

- **Validity duration**: 5 minutes maximum
- **Attempts**: 3 maximum per code
- **Invalidation**: Code destroyed after successful use
- **Storage**: `login_tokens` table or temporary column in `users`

Suggested Technical Structure:

```
```sql
-- Table for login tokens
CREATE TABLE login_tokens (
 id BIGINT PRIMARY KEY AUTO_INCREMENT,
 email VARCHAR(255) NOT NULL,
 token VARCHAR(6) NOT NULL,
 expires_at TIMESTAMP NOT NULL,
 attempts INT DEFAULT 0,
 used_at TIMESTAMP NULL,
 created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP
);
```
```

2.3 Role Management and Redirections

Role Structure in users table:

```
```sql
-- Columns in users table
is_creator BOOLEAN DEFAULT FALSE, -- Super Admin (only 1)
is_admin BOOLEAN DEFAULT FALSE, -- Company admin
company_id BIGINT NULL, -- Link to company
active BOOLEAN DEFAULT TRUE -- Active/inactive account
```
```

Automatic Redirections After Login:

- **Creator** (`is_creator = true`) → `/dashboard/creator`
- **Admin** (`is_admin = true`) → `/dashboard/admin`
- **Employee** (neither creator nor admin) → `/dashboard/employee`

Laravel Security Middleware:

```
```php
// Middleware to check roles
Route::middleware(['auth', 'role:creator'])->group(function () {
 Route::get('/dashboard/creator', [CreatorController::class, 'dashboard']);
});

Route::middleware(['auth', 'role:admin'])->group(function () {
 Route::get('/dashboard/admin', [AdminController::class, 'dashboard']);
});

Route::middleware(['auth', 'role:employee'])->group(function () {
 Route::get('/dashboard/employee', [EmployeeController::class, 'dashboard']);
});
```
```

3. Creator (Super Admin) Features

3.1 Global Dashboard

Main interface with key metrics:

Main Statistics:

- **Total active companies**
- **Total active employees**
- **Total pending requests** (leave, absence, expense, advance)
- **Global revenue** and detailed by company
- **Time-based charts** of registrations and activities

Data Structure Example:

```
```php
$stats = [
 'total_companies' => Company::where('active', true)->count(),
 'total_employees' => User::where('is_admin', false)->where('is_creator', false)->count(),
 'pending_requests' => [
 'leaves' => LeaveRequest::where('status', 'pending')->count(),
 'absences' => AbsenceRequest::where('status', 'pending')->count(),
 'expenses' => ExpenseRequest::where('status', 'pending')->count(),
 'advances' => AdvanceRequest::where('status', 'pending')->count(),
],
 'revenue' => [
 'total' => $totalRevenue,
],
];
```
```

```

        'by_company' => $revenueByCompany
    ]
];
...

```

3.2 Company Creation

Creation Form:

...

| | |
|---------------------------------|--|
| Create a Company | |
| Name: [_____] | |
| Address: [_____] | |
| SIRET: [_____] (14 digits) | |
| HR Contact: [_____] | |
| Contact Email: [_____] | |
| Price/employee: [_____] €/month | |
| Logo: [Choose file] | |
| [Create Company] | |

...

SIRET Validation:

The French SIRET is a 14-digit number (SIREN + NIC). Required validation:

```

```php
// Laravel validation
'siret' => 'required|digits:14|unique:companies,siret'
...

```

#### #### Companies Table Structure:

```

```sql
CREATE TABLE companies (
    id BIGINT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(255) NOT NULL,
    address TEXT NOT NULL,
    siret VARCHAR(14) UNIQUE NOT NULL,
    hr_contact_name VARCHAR(255) NOT NULL,
    hr_contact_email VARCHAR(255) NOT NULL,
    price_per_employee DECIMAL(8,2) NOT NULL,
    logo_path VARCHAR(255) NULL,
    active BOOLEAN DEFAULT TRUE,
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,

```

```

        updated_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE
        CURRENT_TIMESTAMP
    );
    ...

```

3.3 Billing System

Automatic Calculation:

- ****Base****: Number of active employees × monthly rate per employee
- ****Period****: Automatic monthly billing
- ****Generation****: Automatic PDF with details

Calculation Example:

```

```php
// Monthly calculation per company
$activeEmployees = User::where('company_id', $company->id)
 ->where('is_admin', false)
 ->where('is_creator', false)
 ->where('active', true)
 ->count();

$monthlyAmount = $activeEmployees * $company->price_per_employee;
...

```

#### #### Invoices Table Structure:

```

```sql
CREATE TABLE invoices (
    id BIGINT PRIMARY KEY AUTO_INCREMENT,
    company_id BIGINT NOT NULL,
    invoice_number VARCHAR(50) UNIQUE NOT NULL,
    month INT NOT NULL,
    year INT NOT NULL,
    employee_count INT NOT NULL,
    price_per_employee DECIMAL(8,2) NOT NULL,
    total_amount DECIMAL(10,2) NOT NULL,
    pdf_path VARCHAR(255) NULL,
    sent_at TIMESTAMP NULL,
    paid_at TIMESTAMP NULL,
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    FOREIGN KEY (company_id) REFERENCES companies(id)
);
...

```

3.4 Administrator Invitation Management

Invitation Process:

1. ****Company selection****: Choose target company
1. ****Information entry****: Name, first name, email of future admin
1. ****Invitation generation****: Unique invitation token
1. ****Email sending****: Secure account activation link

Invitations Table Structure:

```
```sql
CREATE TABLE invitations (
 id BIGINT PRIMARY KEY AUTO_INCREMENT,
 company_id BIGINT NOT NULL,
 email VARCHAR(255) NOT NULL,
 token VARCHAR(255) UNIQUE NOT NULL,
 invited_by_id BIGINT NOT NULL,
 accepted_at TIMESTAMP NULL,
 expires_at TIMESTAMP NOT NULL,
 created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
 FOREIGN KEY (company_id) REFERENCES companies(id),
 FOREIGN KEY (invited_by_id) REFERENCES users(id)
);
```
```

3.5 Communication System

Communication Types:

- ****Individual****: Message to a specific admin
- ****By company****: Message to all admins of a company
- ****Global****: Message to all admins of all companies

Communication Interface:

...

| | |
|------------------------------|--|
| Send a Message | |
| Recipient: [▼ All companies] | |
| Subject: [_____] | |
| Message: [_____] | |
| [_____] | |
| [_____] | |
| [Send] | |

...

3.6 Extended Rights

The Creator has ****all rights**** on ****all companies****:

- View all employees
- Validate/reject all requests
- Access all dashboards
- Modify all information
- Deactivate accounts

4. Company Administrator Features

4.1 Dedicated Dashboard

Internal HR Statistics:

- ****Number of active employees**** in the company
- ****Pending requests**** (leave, absence, expense, advance)
- ****Approved requests**** this month
- ****Rejected requests**** this month
- ****Time-based charts**** of requests

Metrics Example:

```
```php
$adminStats = [
 'active_employees' => User::where('company_id', auth()->user()->company_id)
 ->where('is_admin', false)
 ->where('active', true)
 ->count(),
 'pending_requests' => [
 'leaves' => LeaveRequest::whereHas('user', function($q) {
 $q->where('company_id', auth()->user()->company_id);
 }->where('status', 'pending')->count(),
 // ... other requests
],
 'this_month_approved' => // Calculate approved requests this month
];
```
```

4.2 Employee Management

Creation by invitation:

The admin cannot directly create an employee. They must invite them via email.

Employee Invitation Form:

...

| | |
|---------------------------------|--|
| Invite an Employee | |
| Last Name: [_____] | |
| First Name: [_____] | |
| Email: [_____] | |
| Phone: [_____] | |
| Address: [_____] | |
| Birth Date: [_____] | |
| Gross Hourly Rate: [_____] €/h | |
| Gross Salary: [_____] €/month | |
| Contract Type: [▼ CDI/CDD/Temp] | |
| Hire Date: [_____] | |
| CV: [Choose file] | |
| [Invite Employee] | |

...

French Contract Types:

- ****CDI****: Permanent Contract (indefinite duration)
- ****CDD****: Fixed-term Contract (temporary)
- ****Temp****: Temporary agency work

Employee_profiles Table Structure:

```
```sql
CREATE TABLE employee_profiles (
 id BIGINT PRIMARY KEY AUTO_INCREMENT,
 user_id BIGINT UNIQUE NOT NULL,
 phone VARCHAR(20) NULL,
 address TEXT NULL,
 birth_date DATE NULL,
 hourly_rate DECIMAL(8,2) NULL,
 monthly_salary DECIMAL(10,2) NULL,
 contract_type ENUM('CDI', 'CDD', 'Temp') NOT NULL,
 hire_date DATE NOT NULL,
 cv_path VARCHAR(255) NULL,
 created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
 updated_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE
 CURRENT_TIMESTAMP,
 FOREIGN KEY (user_id) REFERENCES users(id) ON DELETE CASCADE
);
```
```

Departure Management:

- ****Resignation****: Employee leaves voluntarily
- ****Contract end****: Natural expiration (CDD/Temp)
- ****Termination****: Break initiated by employer

```
```php
// Deactivate an employee
$user = User::find($id);
$user->update([
 'active' => false,
 'departure_date' => now(),
 'departure_reason' => $reason // resignation, contract_end, termination
]);
```
```

4.3 HR Request Management

Request Types:

- ****Leave****: Paid vacation (legally mandatory in France)
- ****Absence****: Sick leave, training, unpaid leave
- ****Expense reports****: Professional expense reimbursement
- ****Advances****: Salary advance

Validation Interface:

...

| | |
|---------------------------------|--|
| Pending Requests | |
| Leave - John Doe | |
| From 15/07 to 22/07 (5 days) | |
| Reason: Summer vacation | |
| [Approve] [Reject] | |
| Advance - Mary Smith | |
| Amount: 500€ | |
| Reason: Urgent medical expenses | |
| [Approve] [Reject] | |

...

Validation Workflow:

1. ****Receipt****: Request created by employee
1. ****Notification****: Automatic email to admin
1. ****Evaluation****: Admin examines request
1. ****Decision****: Approval or rejection with comment

1. **Notification**: Response sent to employee

4.4 Internal Communication System

Message Types:

- **Individual**: Message to a specific employee
- **Collective**: Message to all company employees
- **Urgent**: Priority message with push notification

Communication Interface:

...

| | |
|------------------------------|--|
| Internal Communication | |
| Recipient: [▼ All employees] | |
| Priority: [▼ Normal] | |
| Subject: [_____] | |
| Message: [_____] | |
| [_____] | |
| [Send] | |

...

4.5 Invoice Consultation

The admin can view their company's invoices:

- **Current invoices**: Current month
- **History**: All past invoices
- **Details**: Number of billed employees, amount
- **Download**: PDF invoices

🚀 5. Employee Features

5.1 Personal Dashboard

Overview:

- **My requests**: Status of all requests
- **Leave balance**: Available/used days
- **Upcoming absences**: Validated upcoming leave
- **Messages**: Company communications

Dashboard Example:

...

| | |
|--------------------------|--|
| My Dashboard | |
| My Statistics | |
| Remaining leave: 18 days | |
| Pending requests: 2 | |
| Approved requests: 5 | |
| My Recent Requests | |
| Leave 15-22/07: Approved | |
| Advance 500€: Pending | |
| Sick leave: Approved | |

...

5.2 HR Request Submission

Leave Request Form:

...

| | |
|--------------------------------|--|
| Leave Request | |
| Start Date: [_____] | |
| End Date: [_____] | |
| Days Count: [____] (auto-calc) | |
| Reason: [_____] | |
| Comment: [_____] | |
| [Submit Request] | |

...

Expense Report Form:

...

| | |
|------------------------------------|--|
| Expense Report | |
| Date: [_____] | |
| Amount: [_____] € | |
| Category: [▼ Transport/Meals/Acc.] | |
| Description: [_____] | |
| Receipt: [Choose file] | |
| [Submit Request] | |

...

Request Tables Structure:

```sql

-- Leave requests

```
CREATE TABLE leave_requests (
 id BIGINT PRIMARY KEY AUTO_INCREMENT,
 user_id BIGINT NOT NULL,
 start_date DATE NOT NULL,
 end_date DATE NOT NULL,
 days_count INT NOT NULL,
 reason TEXT NOT NULL,
 status ENUM('pending', 'approved', 'rejected') DEFAULT 'pending',
 admin_comment TEXT NULL,
 approved_by_id BIGINT NULL,
 created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
 FOREIGN KEY (user_id) REFERENCES users(id)
);
```

-- Expense reports

```
CREATE TABLE expense_requests (
 id BIGINT PRIMARY KEY AUTO_INCREMENT,
 user_id BIGINT NOT NULL,
 amount DECIMAL(10,2) NOT NULL,
 category VARCHAR(50) NOT NULL,
 description TEXT NOT NULL,
 receipt_path VARCHAR(255) NULL,
 status ENUM('pending', 'approved', 'rejected') DEFAULT 'pending',
 admin_comment TEXT NULL,
 approved_by_id BIGINT NULL,
 created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
 FOREIGN KEY (user_id) REFERENCES users(id)
);
```

...

### ### 5.3 Personal Profile Management

#### #### Modifiable Information:

- \*\*Name, first name\*\*: Civil status change
- \*\*Email\*\*: Contact address
- \*\*Phone\*\*: Personal number
- \*\*Address\*\*: Home address

#### #### NON-modifiable Information (only admin can):

- Salary

- Hourly rate
- Contract type
- Hire date

### ### 5.4 Communication Reception

#### #### Types of Messages Received:

- **\*\*General information\*\***: Company announcements
- **\*\*Notifications\*\***: Request responses
- **\*\*Urgent\*\***: Priority messages

#### #### Messaging Interface:

...

|                               |  |
|-------------------------------|--|
| My Messages                   |  |
| URGENT - Meeting tomorrow 9am |  |
| Sent on 12/07 at 14:30        |  |
| Your leave request approved   |  |
| Sent on 11/07 at 10:15        |  |
| New remote work policy        |  |
| Sent on 10/07 at 16:45        |  |

...

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## ## 6. Technical Specifications

### ### 6.1 Technology Stack

#### #### Backend:

- **\*\*Framework\*\***: Laravel 11
- **\*\*PHP\*\***: Version 8.1+
- **\*\*Database\*\***: MySQL 8.0
- **\*\*Cache\*\***: Redis (optional)
- **\*\*Queue\*\***: Laravel Queue (for emails)

#### #### Frontend:

- **\*\*CSS Framework\*\***: Bootstrap 5
- **\*\*Template Engine\*\***: Blade (Laravel)

- **JavaScript**: Vanilla JS + Bootstrap JS
- **Icons**: Bootstrap Icons or Font Awesome

#### #### Authentication:

- **Base**: Laravel Breeze (customized)
- **Sessions**: Laravel sessions
- **Middleware**: Custom role-based middleware

### ### 6.2 Migration Structure

#### ##### Users Migration:

```
```php
Schema::create('users', function (Blueprint $table) {
    $table->id();
    $table->string('name');
    $table->string('email')->unique();
    $table->timestamp('email_verified_at')->nullable();
    $table->boolean('is_creator')->default(false);
    $table->boolean('is_admin')->default(false);
    $table->foreignId('company_id')->nullable()->constrained()->onDelete('cascade');
    $table->boolean('active')->default(true);
    $table->date('departure_date')->nullable();
    $table->string('departure_reason')->nullable();
    $table->timestamps();
});
```
```

### ### 6.3 Notification System

#### ##### Notification Types:

- **Email**: External notifications
- **Internal**: In-app notifications
- **Push**: Browser notifications (optional)

#### ##### Trigger Events:

- New HR request
- Request validation/rejection
- New message
- New employee invited
- Invoice generated

### ### 6.4 File Management

#### ##### Storage:

- **Directory**: `storage/app/public/`
- **Supported types**: PDF, JPG, PNG, DOC, DOCX
- **Max size**: 5MB per file

#### #### Folder Structure:

```

...
storage/app/public/
├── companies/
│ ├── logos/
│ └── invoices/
├── employees/
│ ├── cvs/
│ └── documents/
├── expenses/
│ └── receipts/
...

```

## ## 7. Design Specifications

### #### 7.1 Visual Identity

#### #### Logo and Colors:

- **Logo**: Modern and clean
- **Primary color**: Professional blue (#2563eb)
- **Secondary color**: Gray (#6b7280)
- **Success color**: Green (#059669)
- **Error color**: Red (#dc2626)

#### #### Typography:

- **Family**: Inter or Roboto
- **Titles**: Font-weight 600
- **Text**: Font-weight 400

### ### 7.2 General Layout

#### #### Common Structure:

```

```html
<div class="container-fluid">
  <div class="row">
    <div class="col-md-3">
      <!-- Sidebar navigation -->

```

```
</div>
<div class="col-md-9">
  <!-- Main content -->
</div>
</div>
</div>
```
```

#### #### Sidebar Navigation:

- **Creator**: Companies, Billing, Statistics
- **Admin**: Employees, Requests, Communications, Invoices
- **Employee**: Requests, Profile, Messages

### ### 7.3 Specific Pages

#### #### Public Homepage:

- **Hero section**: GetSoluce presentation
- **Carousel**: Main features
- **Testimonials**: Customer feedback
- **Call-to-action**: Demo request

#### #### Login Page:

- **Clean design**: Focus on login
- **No distractions**: No registration link
- **Responsive**: Mobile adaptation

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## ## 8. Security and Compliance

### ### 8.1 Data Security

#### #### Encryption:

- **Sensitive data**: AES-256 encryption
- **Passwords**: Bcrypt hashing
- **Transmission**: HTTPS mandatory

#### #### Data Validation:

- **Client-side**: JavaScript validation
- **Server-side**: Laravel validation
- **Sanitization**: Data escaping

### ### 8.2 GDPR Compliance



#### #### User Rights:

- **Right of access**: Personal data export
- **Right of rectification**: Data modification
- **Right to erasure**: Data deletion
- **Right to portability**: Standard format export

#### #### Technical Measures:

- **Pseudonymization**: Non-speaking identifiers
- **Minimization**: Collection limited to necessary
- **Retention**: Limited storage duration
- **Traceability**: Access and modification logs

### ### 8.3 Backup and Recovery

#### #### Backups:

- **Frequency**: Daily automatic
- **Retention**: 30 days minimum
- **Storage**: Secure separate location
- **Testing**: Monthly verification

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## ## 9. Expected Deliverables

### ### 9.1 Web Application

#### #### Complete Features:

- OTP authentication system
- 3 differentiated dashboards
- Complete company management
- Invitation system
- HR request management
- Communication system
- Automatic billing
- Responsive interface

### ### 9.2 Documentation

#### #### Technical Documentation:

- **Installation**: Step-by-step guide

- **Configuration**: Environment variables
- **Database**: Schema and relationships
- **API**: Endpoints and parameters
- **Deployment**: Production deployment procedure

#### #### User Documentation:

- **Creator Guide**: All features
- **Admin Guide**: Employee management
- **Employee Guide**: Daily usage
- **FAQ**: Frequently asked questions

### ### 9.3 Visual Elements

#### #### Brand Guidelines:

- **Logo**: Color and monochrome versions
- **Color palette**: Hexadecimal codes
- **Typography**: Families and weights
- **Iconography**: Icon library

#### #### UX Mockups:

- **Wireframes**: Page structure
- **Mockups**: Finalized design
- **Prototypes**: User interactions

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## ## 10. Development Considerations

### ### 10.1 Development Environment

#### #### Prerequisites:

- **PHP**: 8.1+
- **Composer**: 2.0+
- **Node.js**: 16+ (for assets)
- **MySQL**: 8.0+

#### #### Laravel Configuration:

```
```bash
```

```
# Installation
```

```
composer install
```

```
npm install
```

```
php artisan key:generate
```

```
php artisan migrate
```

php artisan db:seed
...

10.2 Testing

Test Types:

- **Unit tests**: Models and services
- **Feature tests**: Endpoints and features
- **Browser tests**: Complete user journeys

Minimum Coverage:

- **Controllers**: 90%
- **Models**: 95%
- **Services**: 85%

10.3 Performance

Optimizations:

- **Cache**: Frequent queries
- **Pagination**: Long lists
- **Lazy loading**: Eloquent relationships
- **Compression**: CSS/JS assets

Monitoring:

- **Logs**: Laravel Log
- **Errors**: Error tracking system