Invoicing ROI Simulator — Product Requirement Document (PRD)

1. Overview

The Invoicing ROI Simulator is designed to help finance teams, SMEs, and decision-makers evaluate the return on investment (ROI) of adopting automated invoicing solutions. By inputting their current manual invoicing metrics and comparing them against projected improvements from an automation tool, users can visualize potential time savings, cost reductions, and financial benefits.

Objective: Provide a lightweight, intuitive tool that enables non-technical users to simulate financial impact quickly.

2. Goals & Success Metrics

Primary Goals: - Enable users to input baseline (current) and projected (automated) invoicing parameters. - Provide a clear ROI percentage, cost savings, and payback period calculation. - Display results in both numeric and graphical formats. **Success Metrics:** - 95% of test users can generate a simulation in under 3 minutes. - Accuracy of ROI calculation within 1% of spreadsheet-based models. - Page load and response times under 1 second.

3. Key Features

Feature	Description
Baseline Input	Allow users to enter current invoicing metrics (volume, cost/hour, error rate, etc.).
Proposed Input	Collect projected improvements from automation (time saved, reduced errors, faster pa
ROI Simulation	Compute ROI, annual savings, and payback period using standard financial formulas.
Visualization	Graphically compare baseline vs. projected results with bar/line charts.
Scenario Editing	Enable users to adjust parameters and re-run simulations quickly.

4. User Flow

1. User lands on the simulator homepage.
2. Inputs baseline invoicing data.
3. Inputs proposed (automated) data.
4. Clicks “Run Simulation”.
5. The system calculates ROI and displays numeric results and visual charts.
6. User can modify data and re-run simulations for comparison.

5. Data & Calculation Logic

Formulas:

• Baseline Annual Cost = Invoices per Month × 12 × Time per Invoice (hrs) × Cost per Hour
• Automated Annual Cost = Invoices per Month × 12 × Reduced Time × Cost per Hour
• Annual Savings = Baseline Cost – Automated Cost
• ROI (%) = (Annual Savings – Implementation Cost) / Implementation Cost × 100
• Payback Period = Implementation Cost / Annual Savings

6. Non-Functional Requirements

- **Performance:** Simulations complete within 1 second.
- **Usability:** Simple, form-driven UI requiring no financial expertise.
- **Scalability:** Easily extendable to support new parameters or integrations.
- **Accessibility:** WCAG 2.1 AA compliance for color contrast and keyboard navigation.

7. Suggested Tech Stack

- **Frontend:** React + Chart.js (for interactivity and visualization)
- **Backend:** Node.js / Express with simple ROI calculation service
- **Data Storage:** JSON or lightweight DB (e.g., SQLite / Firebase)
- **Deployment:** Vercel / Render (for quick web deployment)

8. Risks & Mitigations

- **Risk:** Incorrect formula interpretation → **Mitigation:** Validate with test data.
- **Risk:** Limited user engagement → **Mitigation:** Keep UI minimal and intuitive.
- **Risk:** Performance degradation on large input → **Mitigation:** Optimize calculations and caching.

9. Proposed Timeline (3-Hour Execution)

Phase	Duration	Description
Planning & Wireframing	0:00 – 0:30	Define inputs, outputs, and UI flow.
UI Development	0:30 – 1:30	Create baseline and proposed input forms.
ROI Logic Implementation	1:30 – 2:15	Develop and test calculation engine.
Visualization & Testing	2:15 – 3:00	Add charts, validate data, finalize presentation.

10. Appendix

Glossary:

ROI — Return on Investment

Payback Period — Time required to recover implementation cost

Baseline — Current invoicing process

Proposed — Automated invoicing process