

Acceptance Criteria

Acceptance Criteria: Bilko

“ **Project:** Bilko — Balkan Accounting SaaS **Version:** 0.1 **Date:** 2026-02-23
Author: John (AI Director) **Status:** Draft **Reviewers:** Alem Bašić (CEO)

Document History

Version	Date	Author	Changes
0.1	2026-02-23	John (AI Director)	Initial draft — Phase 1 Serbia MVP

1. Purpose & Methodology

1.1 What Are Acceptance Criteria?

Acceptance criteria are the conditions that the Bilko system must satisfy to be accepted as working correctly. They answer: "**How will we know when this feature is done?**"

For financial software, acceptance criteria are especially critical because errors have direct legal and financial consequences for users (SEF fines, incorrect PDV filings, balance sheet errors).

Good acceptance criteria are:

- **Testable** — Can be verified with a specific test procedure
- **Clear** — Unambiguous; no room for interpretation
- **Complete** — Cover happy path, error paths, and edge cases
- **Financially accurate** — For accounting features: verified against Balkan GAAP and tax law

1.2 Format: Given / When / Then (Gherkin-Style)

Given [an initial context / precondition that is true]
When [an action or event occurs]
Then [the expected outcome is observed]
And [additional expected outcomes, chained]

1.3 Categories of Acceptance Criteria

Category	Description	Example
Positive (Happy Path)	System works as expected with valid inputs	Invoice submitted to SEF successfully
Negative (Sad Path)	System handles invalid inputs gracefully	SEF rejects invoice — error shown
Edge Case	Boundary conditions	Zero-PDV invoice; zero-balance period
Integration	System works with external services	SEF API, exchange rate API
Financial Accuracy	Calculations correct per tax law	PDV = base × 0.20 exact to 4 decimal places
Non-Functional	Performance, accessibility, security	Invoice creation < 5s end-to-end

2. Feature Acceptance Criteria

Module: Authentication & User Management

Feature: User Registration (FR-001)

Feature Description: New users register with email/password and automatically get an organization with Serbian Chart of Accounts. **Business Requirement:** BR-014 **Linked User Stories:** US-001

Positive Scenarios:

#	Scenario	Given	When	Then
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AC-001	Successful registration	A new user with valid email "marko@firma.rs" and strong password	User submits form with org name "Firma d.o.o."	Account created; org created with Kontni Okvir pre-populated; verification email sent within 2 minutes
AC-002	Email verification	Account just created	User clicks verification link (valid within 48h)	Email confirmed; user redirected to organization dashboard
AC-003	Chart of Accounts pre-populated	New organization created	User opens /settings/accounts	All 10 account classes (0-9) visible with standard Serbian accounts

Negative Scenarios:

#	Scenario	Given	When	Then
AC-004	Duplicate email	Account already exists for marko@firma.rs	User submits registration with same email	Error "Nalog sa ovim emailom već postoji"; no account created
AC-005	Weak password	User is on registration form	User submits password "abc123" (no uppercase/special)	Inline error shown before form submission; form not submitted
AC-006	Invalid email format	User is on registration form	User submits "notanemail" as email	Inline validation error shown

Edge Cases:

#	Scenario	Given	When	Then
AC-007	Verification link expiry	Verification link generated 49+ hours ago	User clicks expired link	Error "Link je istekao"; option to resend verification shown
AC-008	Double registration attempt	User submits form twice rapidly	Two identical POST requests within 1 second	Only one account created; second returns appropriate error

Non-Functional Acceptance Criteria:

#	Category	Criterion
AC-009	Performance	Registration + org creation + CoA seeding completes in < 3 seconds
AC-010	Security	Password stored as bcrypt hash (cost 12+); never in plaintext logs

Feature: User Login (FR-002)

Feature Description: Authenticated users log in with email and password. **Business**

Requirement: BR-014 **Linked User Stories:** US-002

Positive Scenarios:

#	Scenario	Given	When	Then
AC-020	Successful login	Verified user with valid credentials	User submits login form	Authenticated; access token (15min) + refresh token (30d) set; redirected to dashboard
AC-021	Silent token refresh	User's access token expired; refresh token valid	User makes API call	New access token issued silently; user not logged out; original request succeeds

Negative Scenarios:

#	Scenario	Given	When	Then
AC-022	Wrong password	Registered user exists	User submits wrong password	Generic error "Pogrešan email ili lozinka" (no user enumeration)
AC-023	Non-existent email	No account for this email	User submits login	Same generic error "Pogrešan email ili lozinka"
AC-024	Account locked	5 failed attempts within 15 minutes	6th attempt	Error "Nalog zaključan. Pokušajte za 15 minuta."
AC-025	Unverified account	Account created but email not verified	User attempts login	Error "Molimo vas potvrdite email adresu" with option to resend

Edge Cases:

#	Scenario	Given	When	Then
AC-026	Session expiry	User idle for 30+ minutes; access token expired; refresh token also expired	User attempts action	Redirected to login; message "Vaša sesija je istekla"

Module: Invoicing

Feature: Create Invoice with PDV (FR-010)

Feature Description: Create invoices with auto-PDV calculation. Financial accuracy is critical — NUMERIC(19,4) precision required. **Business Requirement:** BR-001, BR-002 **Linked User Stories:** US-010

Positive Scenarios:

#	Scenario	Given	When	Then
AC-030	Invoice with 20% PDV	Line item: 1000.0000 RSD base, 20% PDV rate	Invoice created and viewed	PDV amount = 200.0000 RSD; total = 1200.0000 RSD exactly (NUMERIC precision)
AC-031	Invoice with 10% PDV	Line item: 500.0000 RSD base, 10% PDV rate	Invoice created	PDV = 50.0000 RSD; total = 550.0000 RSD
AC-032	Multi-line invoice with mixed PDV rates	3 line items: 1000 @ 20%, 500 @ 10%, 200 @ 0%	Invoice created	PDV breakdown shown per rate; total PDV = 250.0000 RSD; grand total = 1950.0000 RSD
AC-033	Invoice saved as Draft	All required fields filled	User clicks "Save Draft"	Invoice in Draft status; not submitted to SEF; can be edited
AC-034	Invoice number sequential	Previous invoice number: INV-2026-001	New invoice created	Invoice number: INV-2026-002 (no gaps)

Negative Scenarios:

#	Scenario	Given	When	Then
AC-035	Missing required field	Invoice wizard open	User tries to advance without selecting client	Inline error "Odaberite klijenta"; cannot advance to next step
AC-036	Zero-amount invoice	User enters 0 for all line item prices	User tries to save	Validation error "Iznos fakture mora biti veći od 0"
AC-037	Due date before invoice date	Invoice date: 2026-03-01, due date: 2026-02-28	User saves invoice	Validation error "Rok plaćanja mora biti nakon datuma fakture"

Edge Cases:

#	Scenario	Given	When	Then
AC-038	PDV rounding edge case	Line item: 333.3333 RSD, 20% PDV	Invoice calculated	PDV = 66.6667 RSD (ROUND to 4 decimal places, not truncate); total = 400.0000 RSD
AC-039	PDV-exempt invoice (0%)	Business in PDV exemption regime	Invoice created with 0% PDV	PDV amount = 0.0000; total = base amount; PDV field shows "PDV 0%" with exemption reason

Financial Accuracy Criteria:

#	Category	Criterion
AC-040	NUMERIC precision	All PDV and total amounts stored as NUMERIC(19,4) — verified in DB; no floating point
AC-041	PDV law compliance	PDV calculation matches Zakon o PDV Art. 17 — base × rate formula verified for 20 test cases

Feature: SEF E-Invoice Submission (FR-011)

Feature Description: Automatic submission of Serbian B2B invoices to efaktura.gov.rs. **Business**

Requirement: BR-001 **Linked User Stories:** US-011

Positive Scenarios:

#	Scenario	Given	When	Then
AC-050	Successful SEF submission	Serbian B2B invoice, organization has SEF credentials	User clicks "Pošalji fakturu"	UBL 2.1 XML generated and submitted to SEF within 10 seconds; SEF status = "Prihvaćeno"; SEF invoice ID stored
AC-051	SEF status visible	Invoice submitted to SEF	User views invoice detail	SEF status shown: "Prihvaćeno" + SEF invoice ID

Negative Scenarios:

#	Scenario	Given	When	Then
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AC-052	SEF rejects — missing buyer PIB	Invoice created without buyer's PIB (tax ID)	Submission attempted	SEF rejection error shown in Serbian: reason from SEF response; invoice status = "SEF Odbijeno"; user can edit and resubmit
AC-053	SEF API unavailable (503)	SEF platform returns 503	Submission attempted	Invoice queued for retry; user notified "Faktura je u redu čekanja za SEF. Prosleđivanje za max 30 minuta."; max 3 retries

Edge Cases:

#	Scenario	Given	When	Then
AC-054	Duplicate SEF submission attempt	Invoice already submitted and Accepted	User somehow triggers send again	System detects SEF invoice ID exists; blocks resubmission; shows "Faktura je već prosleđena SEF-u"
AC-055	B2C invoice (no SEF required)	Invoice for individual (no PIB)	User sends	PDF emailed; SEF submission skipped; no SEF status shown

Feature: Invoice Payment Tracking (FR-012)

Linked User Stories: US-012

Positive Scenarios:

#	Scenario	Given	When	Then
AC-060	Mark invoice paid	Invoice status = Sent	User marks as paid with date 2026-03-15 and amount 1200 RSD	Status = Paid; double-entry: Debit 1200 (110 — tekući račun), Credit 1200 (200 — potraživanja); payment date recorded
AC-061	Overdue detection	Invoice due 2026-03-14; today is 2026-03-15; status = Sent	System daily check runs	Status automatically changes to Overdue; in-app notification sent

Negative Scenarios:

#	Scenario	Given	When	Then
AC-062	Mark paid with wrong amount	Invoice total = 1200 RSD	User marks paid with amount 1000 RSD	Warning: "Plaćeni iznos (1.000 RSD) je manji od iznosa fakture (1.200 RSD). Potvrdi parcijalno plaćanje."

Module: Expense Tracking

Feature: Create Expense (FR-020)

Feature Description: Record business expenses with double-entry auto-creation. **Business Requirement:** BR-009 **Linked User Stories:** US-020

Positive Scenarios:

#	Scenario	Given	When	Then
AC-070	Record expense with double-entry	Expense: 5000 RSD, category "Kirija" (account 480), paid from tekući račun (110)	User submits expense	Expense saved; Transaction: Debit 5000 (480 — Expenses), Credit 5000 (110 — Bank); LoggedAction entry created
AC-071	Receipt attachment	Expense saved	User attaches JPEG receipt (3MB)	Receipt stored; accessible from expense record; thumbnail shown

Negative Scenarios:

#	Scenario	Given	When	Then
AC-072	Receipt too large	User attaches 15MB PDF	Upload attempted	Error "Dokument ne može biti veći od 10MB"
AC-073	Future date expense	User enters expense date 2027-01-01	Form submitted	Warning "Datum troška je u budućnosti. Potvrdi unos." — requires explicit confirmation

Module: VAT/PDV Management

Feature: PDV Report Generation (FR-050)

Feature Description: Monthly PDV report aggregating all sales and purchase PDV. Critical for legal compliance. **Business Requirement:** BR-002, BR-006 **Linked User Stories:** US-050

Positive Scenarios:

#	Scenario	Given	When	Then
AC-080	January PDV report	January 2026: 3 invoices (PDV $600+400+200=1200$ RSD), 2 expenses (input PDV $240+120=360$ RSD)	User generates January PDV report	Output PDV = 1200 RSD; Input PDV = 360 RSD; Net PDV payable = 840 RSD
AC-081	PDV report PDF export	PDV report generated	User clicks "Exportuj PDF"	PDF with header "PDV Prijava — Januar 2026", org name, PIB, all amounts per official format
AC-082	Zero PDV period	December: no PDV transactions	User generates December PDV report	Zero-value report generated with all fields = 0; exportable (still legally required)

Financial Accuracy Criteria:

#	Category	Criterion
AC-083	PDV accuracy	PDV report totals verified against sum of all invoice/expense PDV fields in DB — must match to 4 decimal places
AC-084	PDV law compliance	Output PDV = sum of all 20% standard + sum of all 10% reduced PDV from outgoing invoices per Zakon o PDV

3. Integration Scenarios

#	Integration	Scenario	Expected Behavior	Test Environment
INT-001	SEF API (efaktura.gov.rs)	Valid invoice submission	SEF returns invoice ID + "Accepted" status within 30s	SEF sandbox

#	Integration	Scenario	Expected Behavior	Test Environment
INT-002	SEF API	Invalid invoice (missing buyer PIB)	SEF returns rejection with specific reason code	SEF sandbox
INT-003	SEF API	SEF unavailable (503)	Bilko queues submission; retries 3× with exponential backoff; user notified	Mocked 503
INT-004	Email provider	Invoice PDF delivery	Recipient receives PDF invoice within 2 minutes of send	Mailtrap / staging
INT-005	Exchange rate API (ECB)	EUR/RSD rate fetch	Rate fetched and cached; used for multi-currency invoice	ECB test endpoint
INT-006	Exchange rate API	API unavailable	Cached rate (< 24h) used; if no cache, user prompted for manual entry	Mocked timeout
INT-007	SEF API	SEF credentials invalid	Error shown to user: "SEF akreditivi su nevalidni. Proveri podešavanja."	SEF sandbox

4. Non-Functional Acceptance Criteria

4.1 Performance

#	Criterion	Target	Test Method
NF-AC-001	Dashboard initial load	< 3 seconds (4G)	Lighthouse on staging
NF-AC-002	Dashboard subsequent navigation	< 1 second	Lighthouse warm cache
NF-AC-003	Invoice creation (full wizard + API save)	< 5 seconds end-to-end	Manual timing + k6
NF-AC-004	SEF submission (Bilko to SEF confirmation)	< 30 seconds	E2E test in SEF sandbox
NF-AC-005	PDV report generation (1 year of data)	< 5 seconds	Load test with synthetic data

4.2 Accessibility

#	Criterion	Target	Test Method
NF-AC-010	No critical accessibility violations	0 critical violations	axe-core on all pages
NF-AC-011	Invoice wizard keyboard navigation	Complete wizard without mouse	Manual keyboard test
NF-AC-012	Color contrast	≥ 4.5:1 (normal text), ≥ 3:1 (large text)	Contrast checker — Bilko #00E5A0 on dark verified

4.3 Security

#	Criterion	Target	Test Method
NF-AC-020	Organization data isolation	User from Org A cannot access Org B data	API test: send request with Org A token for Org B resource — must return 403
NF-AC-021	No financial data in client-side logs	No amounts, invoices, or PII in browser console	Manual browser DevTools review
NF-AC-022	Input injection prevention	No SQL/XSS injection vulnerabilities	OWASP ZAP + Snyk SAST
NF-AC-023	SEF credentials encrypted	SEF API keys not stored in plaintext in DB	DB inspection + code review

4.4 Financial Accuracy

#	Criterion	Target	Test Method
NF-AC-030	Debit = Credit invariant	Sum of all debits = sum of all credits across ALL transactions	Automated DB check in CI: <code>SELECT SUM(debit_amount) - SUM(credit_amount) FROM transactions</code> must = 0
NF-AC-031	NUMERIC precision	Zero floating point errors in PDV and totals	1000 PDV calculations with known expected values; compare to NUMERIC result
NF-AC-032	Exchange rate immutability	Changing today's rate does not affect historical transactions	Create transaction, change rate, verify transaction amount unchanged

5. UAT Scenario Mapping

AC ID	AC Description	UAT Scenario ID	UAT Tester	Status
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AC-001	Successful registration	UAT-001	Beta SMB owner	Not Started
AC-030	Invoice PDV 20% calculation	UAT-010	Beta accountant	Not Started
AC-050	SEF submission success	UAT-020	Beta SMB owner	Not Started
AC-080	PDV report generation	UAT-030	Beta accountant	Not Started
NF-AC-030	Debit = Credit invariant	UAT-ACC-001	Beta accountant	Not Started
NF-AC-001	Dashboard load < 3s	UAT-P01	Any beta user	Not Started

6. Traceability to Requirements

AC ID	Acceptance Criterion	FR Reference	BR Reference	US Reference
AC-001	Successful registration	FR-001	BR-014	US-001
AC-020	Successful login	FR-002	BR-014	US-002
AC-030	Invoice PDV 20%	FR-010	BR-002	US-010
AC-050	SEF submission success	FR-011	BR-001	US-011
AC-060	Mark invoice paid	FR-012	BR-001	US-012
AC-070	Record expense	FR-020	BR-009	US-020
AC-080	PDV report January	FR-050	BR-002, BR-006	US-050

“ Full traceability: [RTM.md](#)

Approval

Role	Name	Date	Signature
Author	John (AI Director)	2026-02-23	
Reviewer			
Business Analyst	John	2026-02-23	

Role	Name	Date	Signature
Product Owner	John	2026-02-23	
QA Engineer	validator agent		
AI Director (John)	John	2026-02-23	
CEO (Alem)	Alem Bašić		

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