

NOTE:

This is a **real-world BRD** prepared and executed at **EngTG** by **Alan Tajbakhsh**—it defines outcomes, scope, and compliance, and served as the basis for our scheduling, packages, and live classroom releases now in operation. I’m sharing it as a **reference artifact** for practitioners tackling similar initiatives.

EngTG — Business Requirements Document (BRD)

Version: 1.0 **Date:** **Author:** Alan Tajbakhsh (Founder, EngTG) **Reviewed by:** Product, Engineering, QA, Finance, Compliance **Approved by:**

0) Document Control

Version	Date	Author	Summary of Changes
1.0	04-15-2023	A. Tajbakhsh	Initial BRD for MVP & R2/R3 roadmap

Distribution List: Leadership, Product, Engineering, QA, Operations, Support, Finance, Marketing, Legal/Compliance.

Related Docs: FRD, BPMN diagrams, ERD, UAT Plan, Release Notes, Runbooks.

1) Executive Summary

EngTG is an online language school operating primarily in Türkiye and serving global learners. We deliver one-to-one English lessons powered by an interactive classroom, AI-assisted practice, and a seamless scheduling & payments experience. The objective of this BRD is to define the business outcomes, scope, and high-level requirements for the next evolution of EngTG’s platform: a timezone-aware booking system with packages/wallet, a production-ready live classroom, and role-based portals for students, teachers, and admins—plus analytics, compliance, and support capabilities.

Primary business outcomes (12-month targets):

- **Show-up rate (attendance):** +20% from baseline.
- **Trial → Paid conversion:** +15% (percentage points).
- **Teacher utilization:** +10% hours filled.
- **Admin minutes/booking:** −50%.
- **Refund rate:** −25%.
- **NPS:** ≥ 55.

Why now: Demand for flexible, AI-augmented language learning is growing. Current manual processes (DM scheduling, bank transfers, ad-hoc Zoom/Meet links) limit scale, quality, and insight. A consolidated platform increases revenue, reduces ops cost, and improves learner outcomes.

2) Business Need & Problem Statement

- **Fragmented experience:** Scheduling via chat, payments outside the platform, and multiple tools in class lead to drops and no-shows.
- **Operational overhead:** Admins spend excessive time coordinating slots, chasing payments, and reconciling balances.
- **Limited visibility:** No unified dashboards for funnel, attendance, outcomes, or teacher utilization.
- **Inconsistent quality:** Lack of standardized class outcomes, homework, and content tagging slows learning progress tracking.

Opportunity: A unified platform with packages, frictionless booking, automated reminders, and AI practice reduces friction and unlocks data-driven growth.

3) Goals, KPIs & Success Criteria

Goals

1. Increase paid bookings and ARR by simplifying demo→purchase→first-class.
2. Improve learning outcomes through structured content, homework, and practice tools.
3. Reduce operational cost via automation and self-service.

KPIs (tracked monthly; targets in §1)

- Funnel: demo booked %, demo attended %, demo→purchase %, time to first class.
- Attendance: show-up %, cancellations by reason, no-show %.
- Utilization: teacher hours available vs booked; peak/off-peak distribution.
- Finance: gross revenue, refunds %, chargebacks, outstanding balances.
- Quality: NPS, homework submission %, average class rating, AI practice usage.

Acceptance of MVP:

- MVP meets functional scope in §7 with DoR/DoD gates; key KPIs instrumented; compliance checks passed; UAT sign-off complete.

4) Scope

In Scope (MVP / Release 1)

1. **Scheduling & Availability:** TZ-aware search, slot hold (15 min), one-off booking, join window (−5/+10 min), student cancellations per policy.
2. **Packages & Wallet:** 10/20/30/50-class packages; balance & expiry; ledger; email receipts/invoices.
3. **Checkout & Payments:** Card payments via Stripe / lyzico; idempotency; refunds.
4. **Live Classroom:** RTC room, reconnect, word-click translator, shared whiteboard, materials player; transcript optional.
5. **Notifications & Calendar:** Email/SMS templates, reminders, ICS invites.
6. **Portals:** Student, Teacher, Admin (role-based).
7. **Reporting (v1):** Core dashboards: funnel, utilization, revenue, quality.
8. **Compliance & Security:** GDPR/UK GDPR/KVKK alignment; role-based access; audit logs.

Future Scope (Release 2/3)

- Recurring booking; homework bank & submissions; vocab SRS trainer; GPT speaking practice v1; payouts & teacher earnings; helpdesk/tickets; advanced reporting; availability exceptions/overrides.

Out of Scope (Now)

- Marketplace for 3rd-party teachers; group classes; mobile native apps; full LMS certification engine beyond EngTG's current certificate issuance.

5) Assumptions & Constraints

Assumptions

- Users have stable email/phone for reminders and verification.
- Majority of payments are card-based; bank transfer flow is optional and manual at MVP.
- Core content exists and can be tagged (level/topic/unit/page).

Constraints

- Budget & team capacity: delivery in 6–8 weeks for MVP with small cross-functional team.
- Compliance: GDPR/UK GDPR/KVKK; PCI-DSS via gateway; data residency as per provider.
- Internationalization: TR/EN initial locales; later expansion to EU/UK/US.

6) Stakeholders & Roles (RACI at BRD level)

Role	Responsibilities	R	A	C	I
Founder / BA (Alan)	Vision, requirements, prioritization, acceptance	R	A	C	I
Product Owner	Scope, roadmap, releases	R	A	C	I
Eng Lead	Technical design, delivery oversight	R	A	C	I
UX/UI	Flows, wireframes, usability	R		C	I
Devs (FE/BE/RTC)	Implementation	R			I
QA	Test plan, UAT coordination	R		C	I
Finance	Reconciliation, reporting			C	I
Compliance/Legal	GDPR/KVKK, policies			C	I
Support	Tier-1/2 playbooks			C	I

7) High-Level Requirements (Business)

7.1 Scheduling & Booking

- **Search by timezone** with DST safety; show next available slots.
- **Slot hold** for 15 minutes; prevents double-booking; auto-release on timeout/abandon.
- **Join window**: button visible from 5 minutes before start until 10 minutes after end.
- **Student cancellation**: configurable policy (e.g., ≥12h free, <12h forfeits).

7.2 Packages & Wallet

- Offer packages: **10/20/30/50**. On success: units added; invoice emailed; ledger **Purchase**.
- **Debit** one unit on successful class completion (teacher outcome).
- **Expiry**: default 6 months from purchase (configurable); warnings at ≤3 units remaining.
- **Refunds**: Manager-initiated with reason; ledger **Refund**; policy-based.

7.3 Payments & Receipts

- Stripe/lyzico checkout; **idempotent** sessions and webhook handling; receipts emailed.
- Support multi-currency display (TRY, USD, GBP, EUR); settle per gateway configuration.

7.4 Live Classroom

- **RTC** join/reconnect; low-bandwidth fallback.
- **Translator**: word-click tooltip in detected locale (≤ 300 ms P95).
- **Whiteboard**: draw/erase/undo/redo; snapshot saved.
- **Materials player**: Listening/Video/Reading/Grammar/MCQ/Fill-gap pages; progress saved.

7.5 Notifications & Calendar

- Email/SMS reminders: 24h & 1h before; reschedule link per policy.
- ICS generation with booking UID; timezone embedded.

7.6 Portals & Roles

- **Student**: buy packages, manage bookings, join class, view balance & history, receive homework (R2).
- **Teacher**: publish availability, view schedule, **mark class outcome** (Successful/Cancelled + reason), view earnings (R2).
- **Admin/Manager**: overrides, refunds, balance adjustments, user/role mgmt, reports.

7.7 Reporting & Analytics (v1)

- Dashboards: **Funnel**, **Utilization heatmap**, **Revenue**, **Quality** (no-show %, refunds %, reconnects).
- Event catalog: `search_slots`, `hold_created`, `booking_confirmed`, `join_clicked`, `session_completed`, `package_purchased`, `refund_issued`.

7.8 Compliance, Security & Privacy

- GDPR/UK GDPR/KVKK: consent, data mapping, DSAR (export/delete), retention policies.
- **Role-based access control**; audit logs for booking, refunds, adjustments.
- PCI-DSS handled by payment gateway; card data not stored on EngTG systems.

8) Business Rules (Key)

1. **Slot Hold**: creating a hold sets booking state = `ProvisionalHold`; only one active hold per student; expires at 15 minutes.
2. **Join Window**: join button visible within [start-5 min, end+10 min]; otherwise hidden with countdown.
3. **Outcome & Debit**: teacher selects outcome within 24h; `Successful` → debit 1 unit; no outcome auto-reminds teacher at T+2h and T+22h.
4. **Cancellation Policy**: student cancellations <12h may forfeit unit; manager can restore via `AdjustmentCredit`.
5. **Refunds**: require reason; notify student; email receipt; refund reverses applicable ledger entries.
6. **Expiry**: packages expire at 180 days unless configured otherwise; expired units are hidden from spend; reinstatement only via manager adjustment.
7. **Teacher Availability**: no overlapping slots; template applies forward (does not change past).
8. **Timezone Rendering**: server UTC; client renders in local TZ with DST correctness.

9) Personas & Key Journeys

Student (A2–B2, TR/EU): wants flexible evening classes, affordable packages, clear progress. **Teacher (Part-time, EN/TR)**: wants predictable schedule, simple tools, on-time payouts. **Admin/Manager**: wants fewer manual steps, clear policies, one source of truth.

Journey 1 — Demo → Purchase → First Class

1. Land on site → book **free 50-minute demo** (TZ-aware).
2. Attend demo → receive follow-up & package offer.

3. Purchase 10-class package → confirm first booking in same session.
4. Reminders → attend class → teacher marks outcome.

Journey 2 — Ongoing Student

- Sees remaining units, suggested next slots, and (R2) homework summary; reschedules within policy.

10) Current State vs To-Be (Summary)

Area	Current	To-Be
Scheduling	Manual chat/DM; calendar conflicts	Self-service TZ search, holds, join window
Payments	Mixed methods, manual reconciliation	In-app checkout, ledger, receipts, refunds
Classroom	Mixed tools, unstable links	Integrated RTC, translator, whiteboard, materials
Reporting	Ad-hoc spreadsheets	Built-in dashboards + event telemetry
Compliance	Manual processes	RBAC, audit logs, DSAR support

11) Non-Functional Requirements (NFRs)

- **Performance:** P95 page load < 2.5s; classroom reconnect < 5s; translator tooltip latency ≤ 300ms.
- **Availability:** ≥ 99.5% for classroom; booking/payment actions are idempotent.
- **Security/Privacy:** encryption at rest; least-privilege roles; audit trails immutable.
- **Accessibility:** WCAG 2.1 AA for portals.
- **Observability:** structured logs, metrics, traces; dashboards for KPIs/SLOs.
- **Internationalization:** locale-aware numbers/dates; TR/EN at MVP.

12) Reporting & Data

Core Entities: Student, Teacher, Booking, ClassSession, Package, LedgerEntry, Material, Notification. **Data Retention:** transcripts up to 12 months then anonymized; payments & invoices 7 years. **Key Reports:** funnel conversion, booking success by hour/TZ, teacher utilization, revenue, refunds, quality (no-show %, reconnects).

13) Dependencies & Integrations

- **Payments:** Stripe / lyzico (checkout sessions, webhooks: `payment_succeeded`, `payment_failed`, `refund_processed`).
- **Comms:** Email/SMS provider (templates, retry/backoff, suppression list).
- **Calendar:** ICS generation (UID=booking_id, TZ=student.tz).
- **RTC/Whiteboard:** Provider SDK (events: `connected`, `disconnected`, `reconnected`).
- **AI Services (R2/3):** GPT endpoints with PII redaction and rate limits.

14) Risks & Mitigations

Risk	Impact	Likelihood	Mitigation
Double-booking	High	Med	Slot holds; optimistic locking; idempotent APIs
DST/TZ bugs	High	Med	Server UTC; proven TZ libs; unit tests for edge dates
Payment disputes	Med	Med	Clear policies; receipts; audit trail; refund workflow
High RTC latency	High	Low	Region routing; bitrate adaptation; monitoring
AI misuse/PII (R2)	Med	Med	PII masking; usage limits; content filters
Data protection gaps	High	Low	DPA, DPIA, DSAR processes; staff training

15) Implementation Plan & Milestones

R1 (MVP, 6–8 weeks)

- Scheduling (search/hold/one-off, join window)
- Packages & wallet; checkout; refunds
- Classroom (RTC + translator + whiteboard + materials)
- Notifications + ICS
- Portals (Student/Teacher/Admin basic)
- Reporting v1; Compliance baseline; UAT + launch

R2 (8–12 weeks after R1)

- Recurring booking; teacher earnings; payouts reports
- Homework & submissions; vocab SRS
- Support tickets; advanced analytics

R3

- GPT speaking practice; availability exceptions/overrides; automation enhancements

16) Acceptance, UAT & Go-Live Criteria

Definition of Ready (DoR): Clear user value; AC in Given/When/Then; UX stub; dependencies known; size estimated. **Definition of Done (DoD):** Code merged; tests pass; AC met; UAT sign-off; telemetry implemented; runbook updated; rollback plan ready.

UAT Scenarios (excerpt)

- One-off booking → Confirmed → ICS received.
- Purchase package → units credited → invoice email.
- Join during window → reconnect after network flap <5s.
- Teacher marks outcome → unit debited; report reflects.

Go-Live Gate: KPIs instrumentation verified; incident response on-call; support playbooks published.

17) Training, Support & Change Management

- **Training:** 30-min role-based videos; quick-start guides for Students/Teachers/Admins.
- **Support:** Tier-1 troubleshooting, escalation matrix, status page for incidents.
- **Comms:** Release notes; in-app "What's new"; email to active users.

18) Budget & ROI (Indicative)

- **Costs:** Engineering (FE/BE/RTC), UX, QA, infra, payments/comm fees.
- **Savings:** Reduced admin effort (−50% minutes/booking), fewer no-shows (−20%), lower refund rate (−25%).
- **Revenue Uplift:** Higher trial→paid (+15%), improved utilization (+10%).

19) Compliance & Data Governance

- **GDPR/UK GDPR/KVKK:** consent capture, privacy policy, DPA with processors, DSAR (export/delete within SLA).
- **Access Control:** role matrix (Student/Teacher/Admin/Finance/Support).
- **Retention:** transcripts 12 months then anonymized; financial records 7 years.
- **Auditability:** immutable logs for booking state changes, refunds, adjustments, payouts.

20) Open Questions

1. Finalize cancellation policy thresholds by package/tier.
2. Define package pricing & currency strategy (TRY primary? FX display rules?).
3. Confirm teacher payout frequency & method (weekly/monthly; local vs international).
4. Select and contract Email/SMS provider (sender IDs, deliverability in TR/EU/UK).
5. Confirm transcript storage & privacy defaults.

21) Glossary

- **Hold:** Temporary reservation of a slot pending payment/confirmation.
- **Join Window:** Time window around class start when users can enter the classroom.
- **Ledger Entry:** Accounting record of unit/cash movement (purchase, debit, refund, adjustment).
- **Utilization:** Percentage of teacher available hours that are booked.

22) Appendix — Alignment to Jira Epics

- **Scheduling & Availability (SCHED):** search, hold, join.
- **Payments & Packages (PAY):** checkout, wallet, refunds.
- **Live Class Experience (CLASS):** RTC, translator, whiteboard, materials.
- **Support & Notifications (SUPP):** Email/SMS, ICS, helpdesk (R2).
- **Reporting & Compliance (OPS):** dashboards, audit logs, RBAC.

End of BRD v1.0