

SE-01-TS11

Technical Specification

Extension of SUK MoodBoss: Firebase / GA4 events, backend events, 4 SUK layers, and the SUK-MP dependency matrix

Version	v1.4 - updated version without estimate
Date	06.05.2026
Status	Full technical specification for SUK MoodBoss. The commercial estimate, cost, and deadlines are set out in a separate document, SE-01-SM11.
Basis	Agreement No. 25042501 dated 24.04.2025; current SUK: seoma.com/ru/analytics-moodboss/
Related Documents	SE-01-TS13 v1.4 - MoodBoss backend architecture; SUK-MP Dependency Matrix v2.2

1. Purpose of the Document

This technical specification defines the full technical scope of the SUK MoodBoss extension. The document separates the technical statement of work from the commercial part: cost, hours, payment schedule, and budget are not part of this technical specification and are recorded only in the separate estimate SE-01-SM11.

The technical specification defines events, data sources, SUK layers, the roles of Firebase / GA4 and the backend, mandatory fields, division of responsibility with the mobile team, and end-to-end acceptance criteria.

2. Context and Current Scope

SUK MoodBoss was previously built as a monitoring dashboard based on data already collected by third-party systems: Firebase Analytics / GA4, Meta / Google / Yandex advertising accounts, and existing product aggregates. The new stage moves SUK into a management control loop that must account not only for the upper advertising funnel, but also for real MoodBoss product scenarios.

This document preserves the previously agreed logic of calendar metrics and extends it to 4 layers: the general application screen, the free entry contour, product modules, and the monetary layer.

3. Relationship between TS11 and TS13

SE-01-TS11 is the SUK document. SE-01-TS13 is the backend technical specification for the Assistant, EventCard, calorie scenario, and Emotion Try-On. The SUK-MP Dependency Matrix v2.2 is an appendix to TS11, but must be aligned with the entities and scenarios of TS13.

Document	Role	Boundary
SE-01-TS11	Technical specification for SUK MoodBoss	Events, data sources, 4 SUK layers, matrix, analytical links, event acceptance.
SE-01-TS13	MoodBoss backend technical specification	Assistant, EventCard, calorie scenario, Emotion Try-On, Health / Calendar, backend-ready hooks.
SUK-MP Dependency Matrix v2.2	Appendix to TS11	Exact events, parameters, sources, responsible areas, and stage statuses.
SE-01-SM11	Estimate	Hours, cost, deadlines, and commercial terms under TS11.

4. Objective of the SUK MoodBoss Extension

- to transform SUK from an advertising and calendar panel into a management tool for the application as a whole;

- to connect the advertising funnel, product actions, Assistant scenarios, EventCard, Health / Calendar, and the monetary layer;
- to separate analytical events into Firebase / GA4 user events and reliable backend events;
- to ensure end-to-end verification: user action -> event -> backend object -> SUK;
- to provide the mobile team with an exact specification of events and mandatory parameters;
- to enable phased launch: first stage, end-to-end acceptance, next stage.

5. General Data Architecture

For correct SUK operation, two types of sources are used:

Source	What It Records	Why It Is Needed
Firebase / GA4	User actions: screen openings, clicks, message sending, preview display, confirm / cancel, photo upload.	Needed for product analytics, funnels, segments, and user behavior.
MoodBoss Backend	Reliable facts: draft created, intent detected, EventCard saved, calories saved, Emotion Try-On result saved, purchase confirmed.	Needed as the source of truth for product objects, statuses, links, and transactions.
SUK seoma.com	Aggregates and displays data from Firebase / GA4, backend, advertising APIs, and purchases	Needed for management control and acceptance.
Advertising APIs	Spend, CPI, advertising channel, campaign, bundle, country, language.	Needed to analyze acquisition and payback.
Store webhooks / purchases	Payments, renewals, refunds, product_id, store, commission.	Needed for the monetary layer and gross remainder.

Firebase / GA4 must not be the sole source of truth for saved product objects. The backend records saving facts, while Firebase records user behavior

6. Structure of the Four SUK Layers

6.1 Layer 1 - General Application Screen

The top summary screen showing the status of MoodBoss as a product. It displays installs, new and active users, A1, I1, P1, D1, D7, revenue, crash-free users, ad spend, CPI, core cost, color zones, period comparison, and transitions to layers 2, 3, and 4.

6.2 Layer 2 - Free Entry Contour

Main application screen, emotional weather forecast, cycle / emotion calendar, and basic daily logic. The layer shows use of the free entry contour, repeat returns, first calendar actions, and transitions to product modules.

6.3 Layer 3 - Product Modules

A unified accounting framework for modules: Assistant, Emotion Try-On, and calorie scenario. For each module, the system must record entry, free use / limit, preview, result saving, paywall, post-payment use, and user return.

6.4 Layer 4 - Monetary Layer for Each Module

This layer records revenue, store commission, variable cost, AI costs, gross remainder, and payback of the acquired user. The monetary layer relies on purchases, store webhooks, advertising attribution, and a variable cost reference book.

7. Data Sources by Layer

Layer	Metric / Object	Data Source and Work
Layer 1	Installs, A1, I1, P1, D1, D7, DAU, MAU, crash-free users	Firebase / GA4. Work: aggregation and normalization into a unified view on the top SUK screen.
Layer 1	Ad spend, CPI	Meta Ads API, Google Ads API, Yandex Direct API. Work: updating linkage with advertising sources and segments.
Layer 1	Application revenue	Backend purchases and Apple / Google / RuStore webhooks.
Layer 2	forecast_viewed, calendar_opened,	Firebase / GA4 from the mobile client; aggregation and calculation of repeated actions on the backend / SUK.

Layer	Metric / Object	Data Source and Work
	calendar_entry_saved	
Layer 2	14-day return to calendar, return to cycle windows	SUK derived metrics based on calendar_opened, calendar_entry_saved, user_id / profile_id / local_date events
Layer 3	Assistant, try-on, calories	Combination of Firebase user events and backend facts: draft, preview, confirm, saved.
Layer 4	Payment, renewal, refund	Store webhooks -> purchases -> SUK.
Layer 4	AI costs	Logs of backend calls to AI providers linked to user_id, scenario_type, and module.

8. Rule for Separating Firebase and Backend

Event Class	Where to Record	Examples
User opened a screen / clicked a button	Firebase / GA4	assistant_opened, calendar_opened, health_section_opened, paywall_shown.
User sent a message or uploaded a photo	Firebase / GA4 + backend API if the action goes to the backend	assistant_message_sent, calorie_photo_uploaded.
Backend detected intent / created draft	Backend	assistant_intent_detected, assistant_draft_created.
Frontend displayed preview	Firebase / GA4	assistant_preview_shown, calorie_result_preview_shown, emotion_try_on_preview_shown.
User confirmed / cancelled	Firebase / GA4 + backend	assistant_draft_confirmed, assistant_draft_cancelled.
Object actually saved	Backend	event_card_created, calorie_result_saved, emotion_try_on_result_saved.
Payment confirmed / renewed / refunded	Backend via store webhooks	purchase_success, purchase_renewed, purchase_refunded.

9. Mandatory Events of the First Stage

The first stage must provide the minimum viable analytics contour for verifying TS13 scenarios and their linkage with SUK.

Group	Event	Source	Purpose
Assistant	assistant_opened	Mobile -> Firebase	Opening the Assistant screen.
Assistant	assistant_message_sent	Mobile -> Firebase / backend API	User message sending.
Assistant	assistant_response_shown	Mobile -> Firebase	Assistant response display.
Assistant	assistant_intent_detected	Backend	Recording the detected intent.
Assistant	assistant_question_asked	Backend / Firebase	Clarifying question in the scenario.
Assistant	assistant_draft_created	Backend	Creation of draft / pending action.
Assistant	assistant_preview_shown	Mobile -> Firebase	Preview display.
Assistant	assistant_draft_confirmed	Mobile + backend	User confirmation.
Assistant	assistant_draft_cancelled	Mobile + backend	User cancellation.
EventCard	event_card_created	Backend	Fact of EventCard saving after confirmation.
EventCard	event_card_opened	Mobile -> Firebase	Opening the card.
EventCard	event_card_updated	Backend / Mobile	Card editing.
Calories	calorie_scenario_started	Mobile -> Firebase	Start of the calorie scenario.
Calories	calorie_photo_uploaded	Mobile -> Firebase / backend API	Food photo upload.
Calories	calorie_result_preview_shown	Mobile -> Firebase	Result preview display
Calories	calorie_result_saved	Backend	Saving the result in EventCard and Health.
Try-On	emotion_try_on_started	Mobile -> Firebase	Start of Emotion Try-On.
Try-On	emotion_try_on_preview_shown	Mobile -> Firebase	Result preview display
Try-On	emotion_try_on_result_saved	Backend	Saving the try-on result.

Group	Event	Source	Purpose
Health / Calendar	health_section_opened	Mobile -> Firebase	Opening the Health section.
Health / Calendar	calendar_opened	Mobile -> Firebase	Opening the calendar.
Health / Calendar	calendar_entry_saved	Backend / Mobile	Saving a calendar entry.

10. Events Critical for End-to-End Acceptance

End-to-End Scenario	Critical Events	Successful Verification Condition
Event from Assistant	assistant_message_sent -> assistant_intent_detected -> assistant_draft_created -> assistant_preview_shown -> assistant_draft_confirmed -> event_card_created -> calendar_entry_saved	The event is created, confirmed, saved, and displayed in Calendar / SUK.
Calories from chat or photo	calorie_scenario_started -> calorie_photo_uploaded or text input -> assistant_question_asked -> calorie_result_preview_shown -> assistant_draft_confirmed -> calorie_result_saved -> event_card_created -> health_section_opened	The calorie result is saved in Health and linked to EventCard.
Emotion Try-On	emotion_try_on_started -> emotion_try_on_preview_shown -> assistant_draft_confirmed -> emotion_try_on_result_saved -> event_card_created	The try-on result is saved in EventCard.
Assistant topics	topic_created -> topic_continued -> topic_renamed -> topic_deleted	The topic is managed as a chat / case; saved objects are not deleted.
SUK linkage	event ids + source + status + timestamps + user_id / profile_id	SUK can connect Firebase events and backend facts into a single user path.

11. Events of the Next Stage

The following events may be moved to the next stage if the first stage is limited to end-to-end acceptance of TS13 and basic SUK operability.

- assistant_action_clicked;
- assistant_scenario_completed;
- assistant_scenario_abandoned;
- forecast_viewed, if not required for the first acceptance of the entry contour;
- calendar_return_14d;
- calendar_cycle_window_return;
- module_entered_from_calendar;
- paywall_shown, purchase_initiated, purchase_success, purchase_renewed, purchase_refunded - if the monetary layer is not included in the first technical launch;
- calculation of store commission, AI costs, gross remainder, and user payback.

12. Mandatory Fields of the Mobile Part

12.1 Basic Fields for All Mobile Events

Field	Mandatory Status	Comment
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Field	Mandatory Status	Comment
user_id	mandatory if the user is authorized	Unified identifier for linkage with the backend
profile_id	mandatory for profile scenarios	Needed for female / male profile and personal context.
event_name	mandatory	Event name according to the matrix.
event_timestamp	mandatory	UTC timestamp of the event.
local_date	mandatory	User date considering timezone.
timezone	mandatory	IANA timezone or agreed format.
language	mandatory	RU / EN / ES or another interface language.
platform	mandatory	iOS / Android / RuStore Android, etc.
app_version	mandatory	Application version
source_screen	mandatory	Screen on which the action occurred.
source_action	mandatory	Button / user action.
session_id	recommended	For linking actions within one user session.

12.2 Assistant Fields

- assistant_chat_id / topic_id;
- assistant_message_id, if available;
- scenario_type;
- scenario_source;
- intent_type, if returned by the backend;
- draft_id / pending_action_id;
- status.

12.3 EventCard, Calories, and Emotion Try-On Fields

- event_card_id, if already available;
- event_type;
- event_status;
- calorie_entry_id;
- health_entry_id;
- calorie_input_type: text, photo, text_photo;
- calorie_estimate, if allowed to be transmitted to the analytics layer;
- emotion_try_on_result_id;
- emotion_mode;
- status: started, preview_shown, confirmed, cancelled, saved, failed.

13. SUK-MP Dependency Matrix

The SUK-MP Dependency Matrix v2.2 is an appendix to this technical specification. It must specify: event name, SUK layer, event source, area of responsibility, mandatory parameters, relationship with TS13, stage status, and whether the event is critical for acceptance.

Matrix Column	Purpose
event_name	Technical event name.
layer	SUK layer: 1, 2, 3, or 4.
source	Mobile Firebase, backend, purchases, ads API, derived metric.
owner	Mobile team, backend, SUK, purchases.
required_fields	Mandatory event parameters.
ts13_relation	Relationship with Assistant, EventCard, Health, Calendar, calories, Emotion Try-On
stage	First stage, end-to-end acceptance, next stage.
acceptance_critical	Yes / no.

14. Division of Responsibility

14.1 Contractor's Area of Responsibility

- MoodBoss backend: receiving events from the mobile client, processing backend facts, and processing store webhooks within the agreed layer;
- SUK on seoma.com: layers, dashboards, aggregations, drill-down logic, and metric display;
- event specification for the mobile team: names, parameters, triggers, and call examples;
- consultations with the mobile team on the specification;
- end-to-end verification: checking that events are correctly received, reach SUK, and are reflected in metrics.

14.2 Mobile Team's Area of Responsibility

- instrumentation of events in the MoodBoss iOS / Android client code according to the provided specification;
- configuration of Firebase Analytics / GA4 SDK in the mobile application project;
- transmission of mandatory identifiers in events and backend API calls;
- publication of updated builds for testing and subsequent release;
- resolution of client-side discrepancies if the actual instrumentation does not match the specification.

14.3 Boundary Between Areas

The technical boundary between the areas is at the level of events arriving from the mobile client in Firebase / GA4 and in the MoodBoss backend API. If an event must record the fact that an object has been saved, the source of truth is the backend. If an event records a user action in the interface, the source is the mobile client / Firebase.

15. Data Quality Requirements

- event names must be stable and must not change without updating the matrix;
- mandatory fields must be transmitted consistently across all supported platforms;
- a single scenario must use common identifiers: user_id, profile_id, draft_id, event_card_id, and scenario_type;
- preview and saved must be separate events;
- event_card_created must mean a saved object after confirmation, not an early draft;
- erroneous and cancelled scenarios must be recorded with failed / cancelled statuses;
- SUK must be able to distinguish a Firebase user event from a backend fact.

16. Acceptance Scenarios

Scenario	Verification	Criterion
Opening Assistant	Open the Assistant screen in the application	assistant_opened appears in Firebase / SUK with mandatory parameters.
Event via chat	Write text, receive intent, see preview, confirm	assistant_message_sent, assistant_intent_detected, assistant_draft_created, assistant_preview_shown, assistant_draft_confirmed, event_card_created are visible.
Calories via photo	Upload photo, go through clarifications, confirm	calorie_photo_uploaded, calorie_result_preview_shown, calorie_result_saved, EventCard, and Health linkage are visible.
Emotion Try-On	Launch try-on from an event or chat, confirm the result	emotion_try_on_started, emotion_try_on_preview_shown, emotion_try_on_result_saved, and linkage with EventCard are visible.
Topic deletion	Delete an Assistant topic	The topic is hidden / archived, saved EventCard and Health records are not deleted.
SUK linkage	Open SUK and check the user path	Events are connected by user_id / profile_id / draft_id /

Scenario	Verification	Criterion
		event_card_id.

17. Limitations of This Technical Specification

- this technical specification does not contain an estimate, cost, hours, or payment schedule;
- it does not describe the frontend design of mobile application screens;
- it does not include actual iOS / Android instrumentation by the Contractor unless separately agreed;
- it does not replace TS13 for the backend entities of the Assistant and EventCard;
- it does not include an extended ML / BI model beyond the described layers;
- it does not guarantee instant appearance of all Firebase / GA4 events in the dashboards because analytics systems have processing delays.

18. Result of Work under the Technical Specification

- complete specification of SUK MoodBoss events for the mobile team and backend.
- separation of Firebase / GA4 user events and reliable backend facts;
- 4-layer SUK MoodBoss structure,
- alignment of the SUK-MP matrix with TS13;
- list of mandatory events of the first stage;
- list of events critical for end-to-end acceptance;
- list of events for the next stage;
- mandatory fields of the mobile part;
- data quality criteria and acceptance scenarios.

19. v1.4 Update: Additional SUK-MP Management Layer

The current TS11 / TS13 remain the base architectural foundation. The received requirements do not cancel the previously agreed model; they add a separate management layer to the SUK-MP matrix: H1-H4, geography, user role, paid / organic, store, build version, data quality, and commercial attribution.

This section clarifies TS11 without changing the base architecture: SUK remains the management control loop; TS13 remains the backend document for the Assistant, EventCard, calorie scenario, and Emotion Try-On; and the SUK-MP matrix is the working contract between mobile, backend, advertising attribution, and SUK.

19.1. Scope Boundary of the Update

- no separate new BI contour is created beyond SUK;
- the TS11 / TS13 architecture is not rebuilt;
- iOS / Android instrumentation by the backend / SUK team is not included;
- administration of advertising accounts instead of the source owners is not included;
- new management fields are added to the SUK-MP matrix v2.2 and displayed in SUK within the limits of available sources.

20. New Management Fields of the SUK-MP Matrix v2.2

Group	Field	Purpose	Source / Area
H1-H4	h_sense	Meaning of the advertising bundle: H1 / H2 / H3 / H4.	Advertising attribution / SUK
H1-H4	story_code	Story / bundle code, if used.	Advertising attribution
H1-H4	creative_screen	MoodBoss screen in the creative: forecast / calendar / partner / indexes / other.	SUK / advertising markup
Advertising	creative_id / ad_id	Creative or ad identifier.	Advertising account
Advertising	campaign_id	Campaign identifier.	Advertising account
Advertising	adset_id / group_id	Ad set / group identifier.	Advertising account
Geography	country_ad	Advertising placement country.	Advertising account

Geography	country_store	Installation / application store country.	Store / Firebase / GA4
Geography	country_event	Country of the in-app event, if available in aggregated form.	Firebase / GA4
Geography	region / city	Region / city, if available in aggregated form and allowed under privacy requirements.	Firebase / GA4
Role	perspective	self / partner / couple / unknown.	Mobile / backend
Role	cycle_status	has_cycle / no_cycle / unknown	Profile / mobile
Traffic	traffic_type	paid / organic / unknown.	Attribution / Firebase / GA4
Traffic	reinstall_flag	Reinstall, if correctly available.	Store / Firebase / attribution
Store	store_source	App Store / Google Play / RuStore / other.	Store / mobile / backend
Version	build_version	Application build version.	Mobile
Quality	test_user / internal_user / test_payment	Exclusion of test users, actions, and payments.	Backend / SUK / mobile
Quality	data_trust_status	green / yellow / red according to data trust rules.	SUK
Quality	last_sync_at	Date and time of the last source synchronization.	SUK

21. End-to-End H1-H4 Management Funnel

For May-June tests and commercial launch, SUK must support the following management route:

H1-H4 -> install -> A1 -> I1 / P1 -> Self / Partner / Couple mode -> D1 / D7 -> core -> free action -> Assistant / scenario -> payroll -> purchase -> renewal.

The level of detail depends on the actual availability of attribution. If the creative level is unavailable or unstable, SUK must show the available level: campaign, language + platform, store, or general level, as well as data trust status.

22. Map of Data Sources and Accuracy Level

Source	Data	Attribution Level	Limitations
Advertising accounts	Spend, impressions, clicks, campaign, creative, placement country.	Creative / campaign if correct IDs are available	Depends on access rights and export stability.
App Store Connect	Installs, store country, purchases, refunds if available.	Store / country / product	Does not always provide full advertising attribution.
Google Play Console	Installs, country, version, purchases, refunds.	Store / country / product.	Depends on access rights and linkage with backend purchases
RuStore	Installs and purchases when API / export is available	Store / product	May require separate export setup.
Firebase / GA4	Mobile events, screens, actions, language, platform, app_version, geography.	User event / session / audience.	There are processing delays and attribution limitations.
MoodBoss Backend	Facts: draft, confirm, EventCard, calorie_saved, emotion_try_on_saved, purchases	Reliable product object.	Does not replace advertising attribution.
SUK	Aggregation, dashboards, trust status, drill-down, accuracy statuses	Management level.	Shows only available and synchronized accuracy.

23. Data Quality Rules and Trust Status

SUK must display data trust status so that advertising, organic, test, and internal team actions are not mixed.

Status	Condition	Display / Action
green	Source synchronized, mandatory fields completed, test data excluded, attribution aligned.	Data may be used for management conclusions.
yellow	There are partial gaps: no creative_id, store_source, country_event, build_version, or there is a synchronization delay.	Data may be used with a caveat.
red	A key source is missing, data is mixed with test data, attribution is unstable, or synchronization has not been completed.	Data must not be used for final conclusions without manual verification.

24. Requirements for Mobile and Advertising Attribution

For the mobile part, it is necessary to check the ability to transmit new parameters without overloading the user's first entry. The recommended model is soft fixation of perspective based on the usage mode: Self / Partner / Couple. If data is not specified, transmit unknown and do not block the user scenario.

For advertising attribution, it is necessary to record the account owners, administrators, backup administrators, export rights, and method of transmitting data to SUK without relying on manual retelling.

25. Acceptance of the v1.4 Update

- new H1-H4, geography, role, traffic_type, store_source, build_version, and trust status fields have appeared in the SUK-MP matrix v2.2;
- SUK displays available management slices and shows unknown / yellow / red where the source is incomplete;
- for one test route, the linkage H1-H4 -> install -> first action -> scenario -> paywall / purchase has been checked, provided a payment test contour is available;
- a list of new parameters and responsibility areas has been prepared for the mobile team;
- a map of owners, access rights, delays, and attribution level has been prepared for advertising sources.

26. Signatures of the Parties

Contractor
Vistadi LLC

Director:  Dildin V.S.

Customer
ONERY OVERSEAS LIMITED

Director:  Boulitsidou A.

