

2015 – 2017

End to End Digitization of SME Credit Rating

From paper-based inspections to digital capture, standardised rating model and trusted digital certificates.

PART OF MY ANALYTICS JOURNEY



2015 – 2017
SME Credit
Rating
Digitization



2019 – 2020
MSME Credit
Assessment



2021
PRISM



2022
OMEGA



2024 – 2025
SME Income
Growth



2025 – 2026
Retail FX
Growth



2026
SAS & GenAI
Translation



Paper Forms

Manual, fragmented
and error-prone
site inspections



Digital Capture

Photos, location and
structured data captured
in the field



Standardised Rating Model

Heuristics-based model
with expert judgement



Digital Certificates

QR-based, trusted
and verifiable



REAL
INSIGHTS.
STRONGER
BUSINESSES.

KEY BUSINESS IMPACT



40–60%

Faster turnaround time

From inspection to decision



20–40%

Lower process cost

Reduced manual effort
and physical logistics



Higher

Data quality & consistency

Structured, complete
and reliable data



Stronger

Trust & authenticity

Geo-tagged evidence
and QR verification



From physical to digital. From delays to decisions.

PEOPLE

PROCESS

DATA

TRUST

The program addressed three related weaknesses in SME credit operations: paper-based field inspections, subjective rating assignment, and physical rating certificates that were expensive to produce and difficult to verify. The common design principle was to digitize information at source, standardize judgment with benchmarks, and build trust directly into the workflow.

Strategic question	Response
Why digitize field inspections?	Paper forms, separately captured photographs and return-to-office scanning created delay, re-keying risk and weak linkage between evidence and the inspection record.
Why standardize ratings?	Ratings varied by banker judgment. A heuristics model developed with senior bankers narrowed the plausible rating range using benchmarks and structured rules.
Why retain a Rating Committee?	The model was deliberately not an ML replacement for credit judgment. The committee refined and validated the model-indicated range before the final rating.
Why digitize certificates?	Printed certificates and physical holograms added logistics and cost. QR-linked digital records enabled faster distribution and verification.
What connected the initiatives?	Each intervention redesigned a specific business friction first, then applied the minimum technology required to make the process faster, more consistent and more trusted.

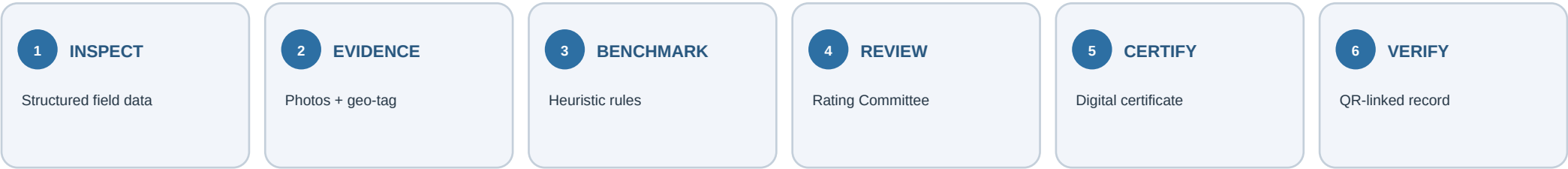
Transformation thesis

This was not digitization for its own sake. It was a sequence of business-led interventions: capture evidence digitally, constrain subjective judgment with benchmark-driven heuristics, preserve expert oversight, and make the final output instantly verifiable.

Transformation architecture

Stage	What changed	Decision value
1. Digital site inspection	Capture structured inspection data, photographs and geo-location on a tablet; synchronize to a central record.	Faster capture Better evidence linkage Lower re-keying
2. Heuristics rating model	Apply benchmark-driven rules created with senior bankers to narrow the possible rating range.	More consistency Comparable benchmarks Structured judgment
3. Rating Committee	Discuss the indicated range, incorporate expert context, refine and validate the final rating.	Human oversight Exception handling Final accountability
4. Digital rating certificate	Generate a digital certificate with a unique QR code linked to the trusted record.	Instant verification Lower logistics Stronger authenticity

End-to-end workflow



Design principle

Digitize the evidence, standardize the decision range, retain expert validation, and make the approved output easy to verify.

3. Heuristics Rating Model & Expert Judgment

Standardization without pretending judgment can be fully automated

Before the model, rating assignment was comparatively subjective and could vary across bankers. The intervention converted senior credit expertise into a structured heuristics framework based on benchmarks, industry context, size, business model and financial strength. It narrowed the possible ratings rather than mechanically producing the final answer.

Component	Role	Why it mattered
Benchmarking	Compare the borrower with relevant peers rather than using a single generic standard.	Makes the rating context-specific and defensible.
Structured rules	Translate senior-bankers' credit heuristics into explicit decision rules and bands.	Reduces variation caused purely by individual style.
Rating range	Model suggests a constrained range of plausible ratings rather than one immutable grade.	Standardizes the starting point while acknowledging uncertainty.
Committee refinement	Rating Committee reviews context, exceptions and qualitative evidence.	Preserves expert challenge and accountability.
Final validation	Committee approves/refines the rating and records the rationale.	Creates a governed human-in-the-loop decision.

What the model was - and was not

It was

A benchmark-driven heuristics model built with senior bankers; a structured way to narrow the possible rating range; a mechanism to improve consistency and comparability; an input to a governed committee process.

It was not

A machine-learning model; an autonomous credit decision engine; a replacement for expert judgment; a mechanism that bypassed the Rating Committee.

Technology foundation

Layer	Role in the credit journey
Digital field capture	Tablet-based forms, in-app photographs and geo-tagged location created a linked evidence record at source.
Synchronization & records	Offline/online synchronization and centralized records reduced return-to-office dependency and re-keying.
Heuristics layer	Benchmark and rule logic translated expert credit practice into a standardized rating range.
Digital identity & verification	QR codes linked certificates to trusted digital records for rapid authenticity checks.
Workflow & auditability	Committee review, approvals, traceability and controlled access retained governance around the decision.

Operating model

Credit / Senior Bankers	Define heuristics, benchmarks, exceptions and interpretation standards.
Field / Operations	Use structured digital inspection workflow and maintain evidence quality.
Technology	Build capture, synchronization, certificate generation, QR verification and secure records.
Rating Committee	Challenge, refine and validate model-indicated rating ranges.
Governance	Maintain access controls, audit trail, data-quality checks and policy compliance.

5. Leadership & Capability Narrative

Business problem -> process redesign -> technology -> governance -> measurable value

The case demonstrates an early transformation pattern that later becomes important in analytics and AI programs: begin with a concrete decision or process problem, encode domain expertise carefully, keep human accountability where judgment matters, and use technology to improve scale, speed and trust.

Leadership dimension	Evidence from the program
Business problem framing	Identified specific friction in inspection, rating consistency and certificate verification rather than starting with a technology.
Process redesign	Moved evidence capture to source, reduced manual hand-offs and connected data, photos and location into one record.
Domain codification	Worked with senior bankers to convert implicit rating heuristics into explicit benchmarks and structured rules.
Human-in-the-loop governance	Designed the heuristics model to narrow the rating range while retaining Rating Committee refinement and validation.
Digital trust	Replaced physical authenticity mechanisms with QR-linked verification tied to a trusted digital record.
Transformation leadership	Connected credit, operations, technology and governance so that the interventions became part of the operating workflow.

Portfolio message

Small technology changes can create large business impact when they solve the right operational problem. Across 2015-2017, the progression was from paper to digital evidence, from subjective ratings to benchmark-driven heuristics with expert oversight, and from physical certificates to instant digital verification.

Project period: 2015-2017 | SME credit operations | Portfolio reconstruction based on the documented initiatives