



AI for 'Always Optimized' Banking Operations

Number in name → 1.63
Score: 0.009 | Support: 21%

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About us

Established in 2013 to accelerate AI-powered problem-solving.

Since then we have **delivered \$Bns in tangible ROI** for our customers **across 100s of use cases.**

Mission

Unlock AI-driven **'Always Optimized' KPIs** for any organization



Global Footprint

Presence across Asia, Europe and US with employees spread across **8 countries**



Partner first DnA

Partner-first organisation with global reach with GSIs



Industry Validated

100s of success stories across within **Fortune 500 companies**



HDFC BANK

Avantax®



Santander

corebridge
financial



Enterprise Ecosystem



Azure



aws



Google Cloud



ChatGPT



Claude



Gemini

Banking Use Cases

Always Optimized top-line and bottom-line impact generating use cases

MARKETING & COMMERCE

Hyper Personalized Campaign / Engagement

Deliver tailored experiences across channels with continuously refined micro-segments to optimize campaigns

Deposit Retention Safeguard

Predict and preemptively engage high-risk customers through adaptive models that identify attrition patterns 60-90 days in advance

Cross-Sell Autonomous Targeting

Dynamically predict purchase propensity with self-updating models that adapt to changing customer preferences

Location-Based Revenue Optimization

Continuously refine localized drivers of loyalty & sales to automatically adjust offers and branch targets

RISK & OPERATIONS

Collection Strategy Refinement

Autonomously flag high-risk debts and automatically optimize intervention timing and channels

Fraud Prevention Shield

Reduce emerging fraud through continuously evolving behavioral pattern recognition

SLA Predictive Monitoring

Continuously forecast IT support ticket resolution against service levels with adaptive intervention triggers

Talent Performance Optimization

Automatically identify evolving characteristics of high performers and continuously refine retention drivers



Our Technology

Generative AI doesn't understand **YOUR** business.

For KPI optimization, AI must leverage knowledge from operational data

Challenges of LLMs

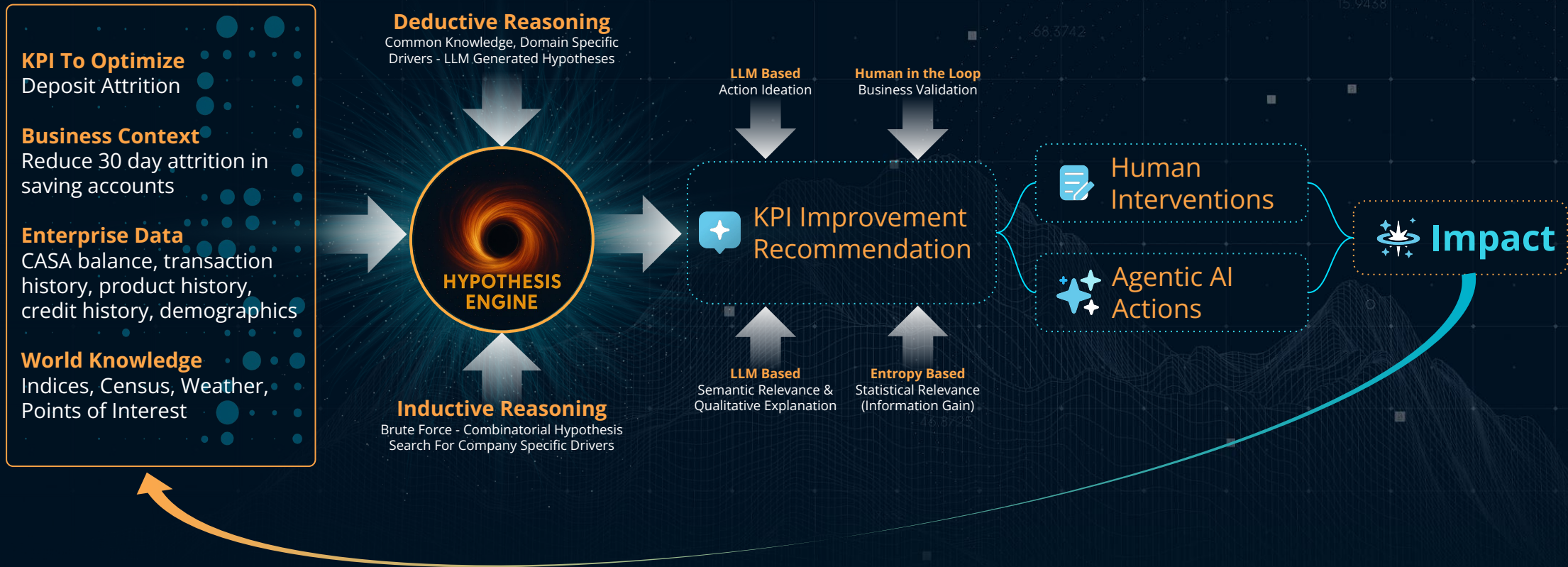
- Limited in understanding patterns hidden in complex operational data
- Unable to ground business reasoning in data.

Unlocking LLM-powered KPI-optimization for solution-builders

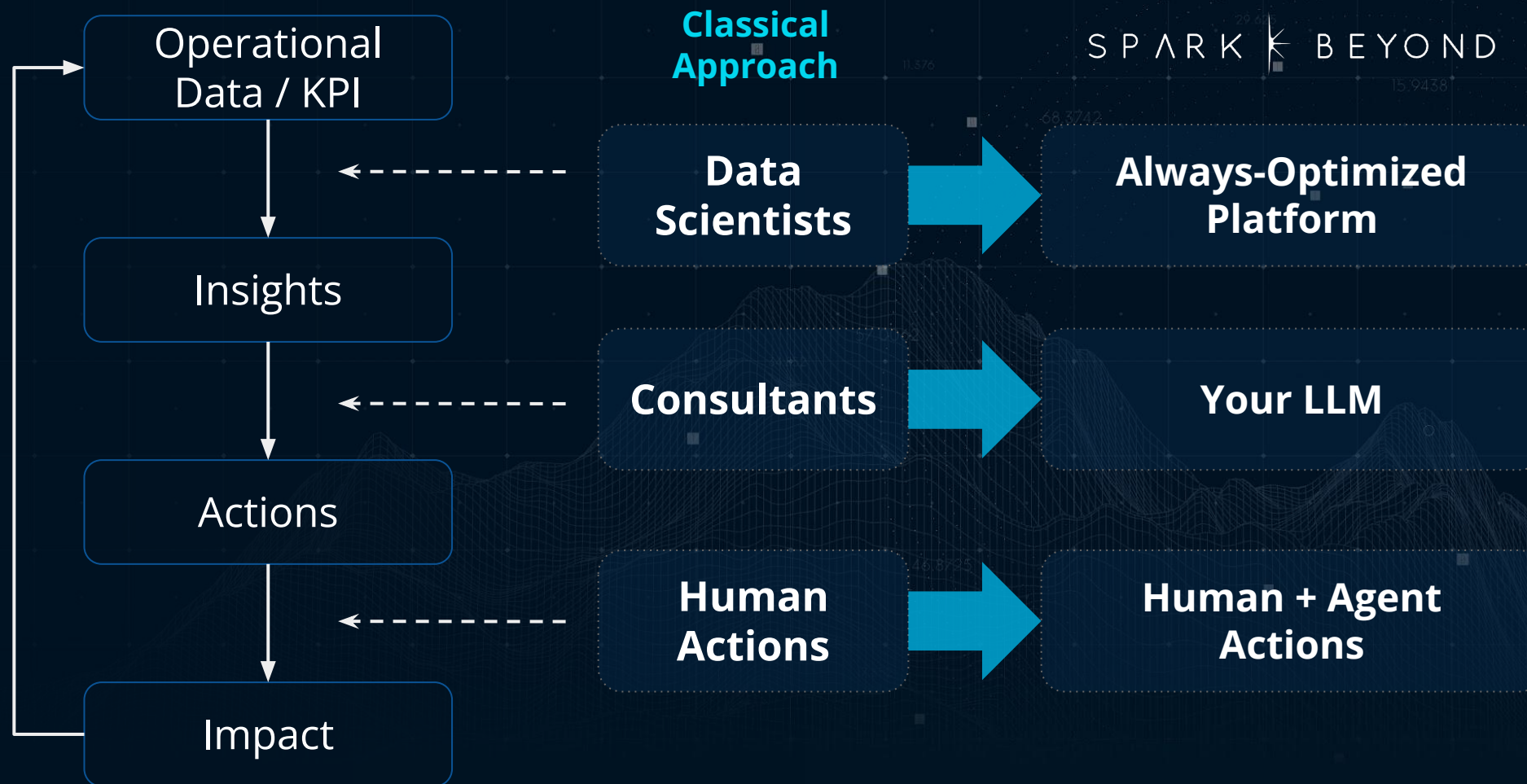


'Always Optimized' KPI Architecture

Continuous feedback loop creating impact from enterprise structured data



Making the paradigm shift to 'Always Optimized' KPI Optimization



AI CoE Platform

Accelerate Results - No Large Data Teams. No Consulting Roadshows.



Discover & Prototype in Weeks

Bypass long discovery cycles. We'll help you rapidly prototype AI solutions that uncover the hidden drivers impacting your KPIs.



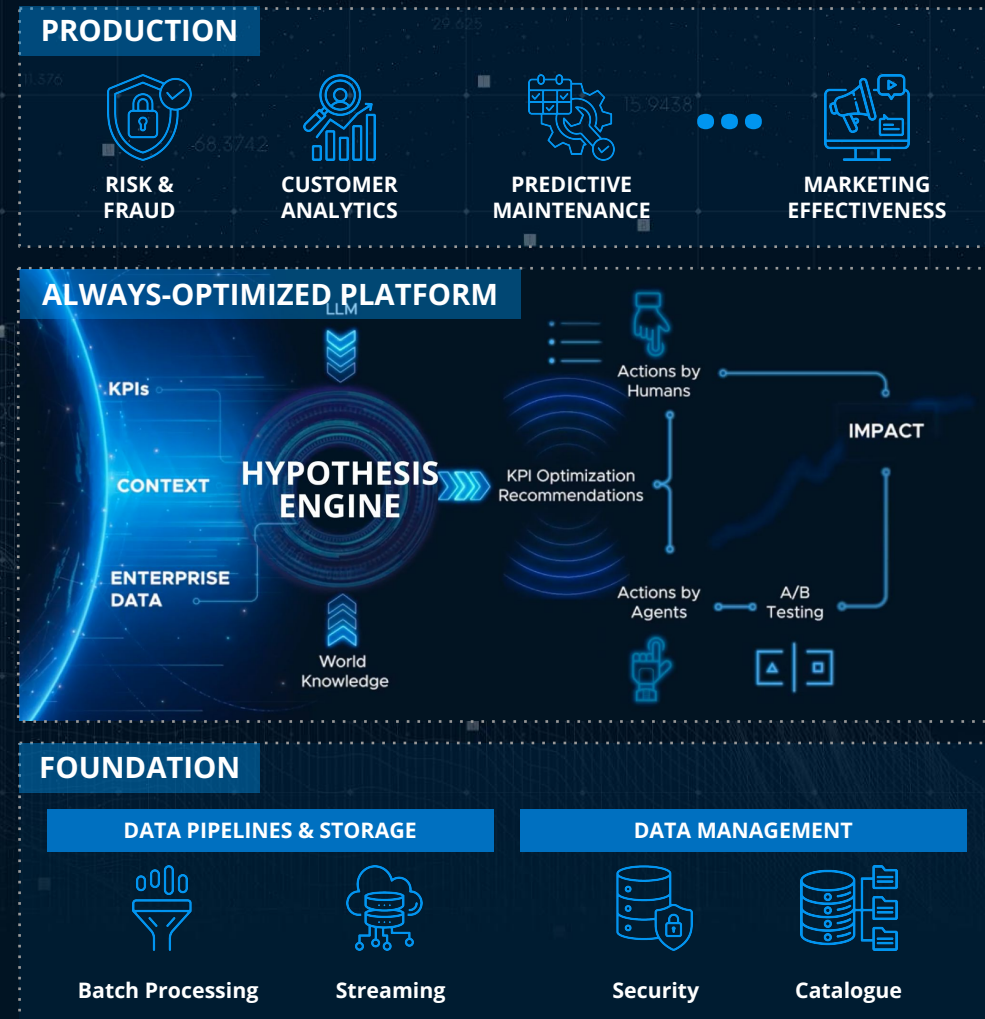
Prove ROI Before You Scale

Validate the P&L impact with a targeted pilot, delivering a concrete business case and tangible value from day one.



Scale to an "Always-Optimized" System

Empower a lean team to deploy and expand use cases, creating a continuous optimization loop for your business.



Why SparkBeyond for Your Modeling

Feature	Impact
Hypothesis Engine	Automatically discover and engineer new features from your operational and business data, surfacing hidden drivers of performance. Generate and test millions of hypotheses to identify true root causes and actionable levers for KPI improvement .
Explainable AI	All insights and recommendations are delivered in clear, natural language—enabling business and operations leaders to understand, trust, and act on AI-driven findings. This transparency is critical for adoption and compliance.
Open Integration	SparkBeyond is cloud-agnostic and integrates seamlessly with Azure, CRMs, ERPs, and LLMs, ensuring flexibility, scalability, and alignment with your tech ecosystem.
Battle Tested @ Scale	The platform is proven across 100+ Fortune 500 deployments , with a track record of rapid time-to-value and measurable ROI.
Unified ML & Gen AI	SparkBeyond is a unique combination of advanced machine learning and LLM-enhanced agent workflows, providing a single foundation for a full spectrum of AI use cases.
Rapid Deployment	Designed for fast implementation and operation in complex, distributed data environments—delivering actionable insights without requiring lengthy data warehouse projects.

Existing approaches to link LLMs to enterprise data are **insufficient to address structured data needs**

Overview of current approaches (not-exhaustive)

Pre-Training & Fine Tuning

What is it?

Pre-training a model on a selected corpus applicable to your enterprise domain
Fine-tuning LLMs to answer domain specific questions

Limitations

- Expensive to re-train
- Does not address structured data sources
- Fine-tuning is better suited to teaching specialized tasks or styles and less reliable for factual recall.

Retrieval Augmented Generation

What is it?

Retrieve data from outside a foundation model and augment your prompts by adding the relevant retrieved data in context

Limitations

- Structured data requires a query for RAG based solution to retrieve
- Retrieved query needs to be LLM compatible
- RAG is largely limited to searchable documents

Code Interpretation & Generation

What is it?

LLM task to translate a query spoken in natural language into SQL/code automatically

Limitations

- User needs to define the intent and insights
- Path to using the insight in an LLM use case is several steps away for a user

In-Context Learning

What is it?

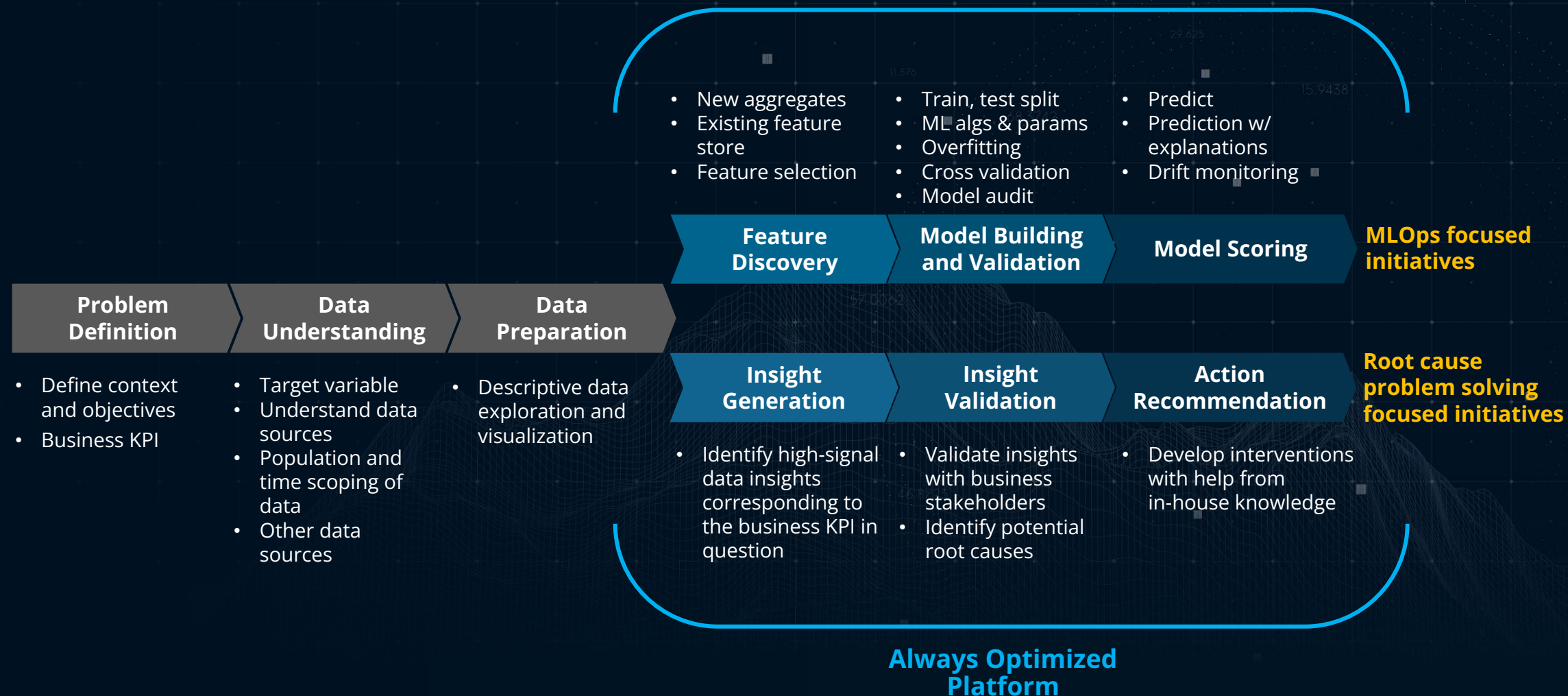
One/few-shot learning example to gain new knowledge (e.g. feeding an existing ppt report about a quantitative analysis)

Limitations

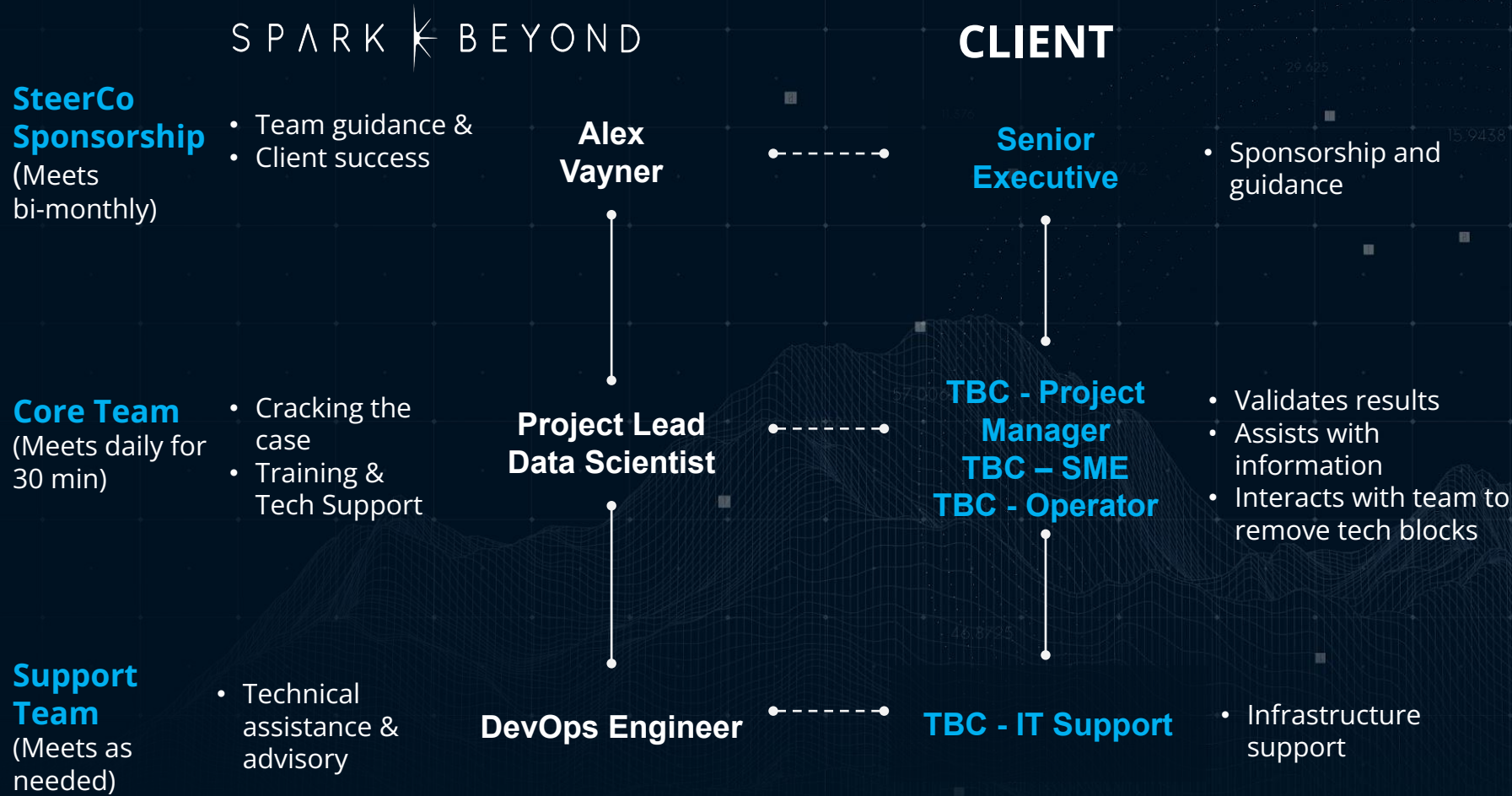
- Context needs to be textual
- Context document can get easily outdated

Velocity to Value

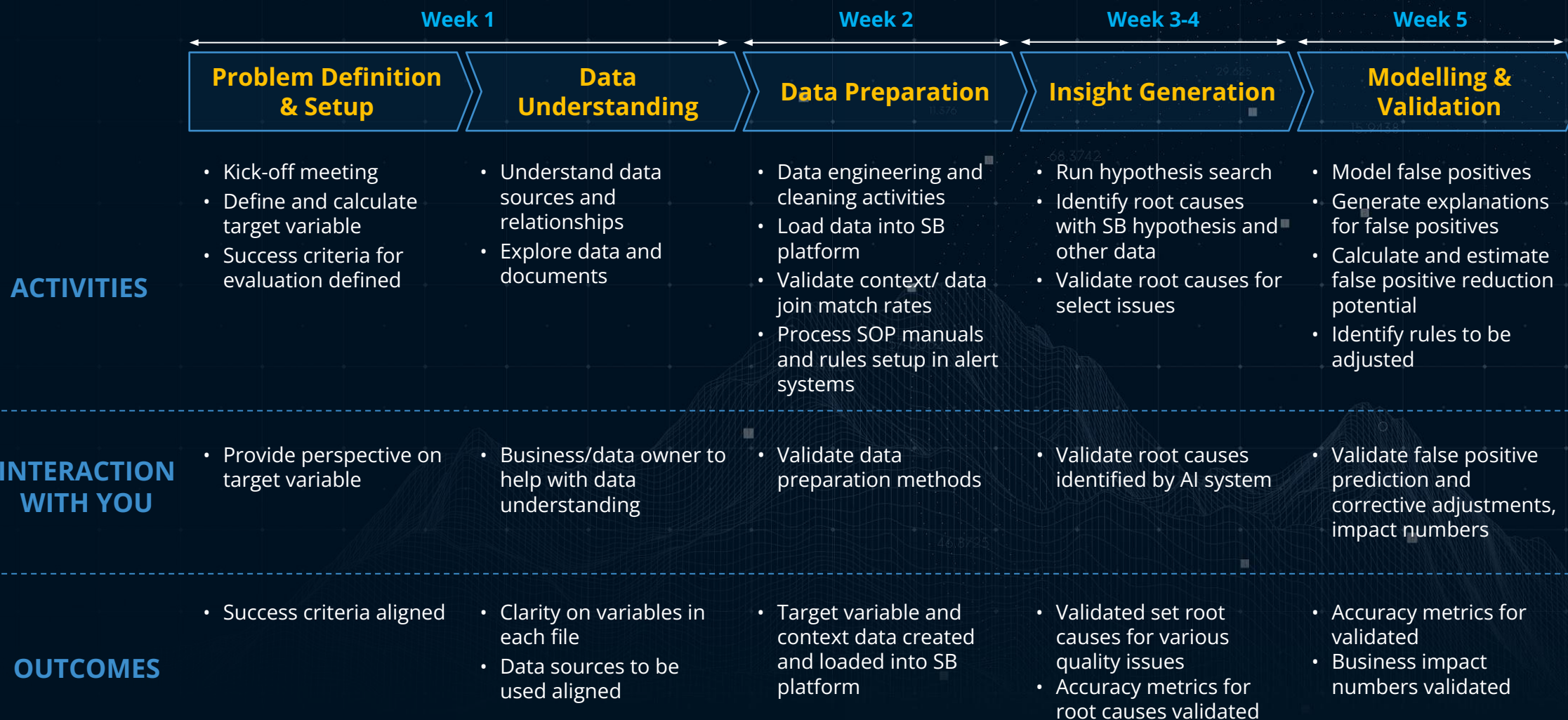
Rapid deployment methodology proven at scale



Proposed Team Structure



Proposed Engagement Model





Credentials

Cross/Up-Sell | Data-Adaptive Revenue Streams

SPARK  BEYOND

**ROI of
high-value
audience
segments:
15x in 5 months**

CHALLENGE

- An American & Swiss multinational financial services corporation needed to deploy AI that could **continuously refine customer acquisition** and up-sell strategies rather than relying on static models

RESULTS

- This adaptive approach improved target response rate translated to **7x greater returns** from the campaign
- SparkBeyond uncovered over 4 million CHF in potential bottom-line value for the business at an **ROI of 15x in 5 months** establishing a foundation for perpetually improving KPI performance

APPROACH

- SparkBeyond connected multiple datasets (including GDPR-compliant external sources) to analyze 100+ million potential drivers behind customer behavior patterns
- Unlike static analytics, the system **continuously evaluated new patterns** and adapted targeting strategies as customer behaviors evolved

Personalized Marketing | Dynamic Offer Engine

SPARK  BEYOND

Personalized product offerings for major US bank



CHALLENGE

- A major US Bank sought to **move beyond static product recommendations** for credit card customers to a system that could continuously learn and adapt based on changing behaviors

APPROACH

- Implemented a **dynamic decision engine** combining web-browsing history with transactional data
- Created personalization logic that **continuously refined** itself based on customer interactions
- Generated and tested thousands of product recommendation rules that evolved with customer preferences

RESULTS

The decision personalization logic tree quickly mobilized **several state-focused interventions**, including:

- Identified and automatically prioritized high-converting customer journey touchpoints
- **Dynamically adjusted targeting across web applications** as user preferences evolved
- Systematically improved engagement with previously low-response customers through continuous offer optimization

Deposit Attrition Prevention | Predictive Retention

SPARK  BEYOND

Deposit Attrition Prevention: \$80mn balance build



CHALLENGE

- A **leading Indian private sector bank** was struggling with attrition in deposits (savings and current account balances) at the rate of 15-20% p.a. for existing customers. They wanted to arrest attrition (loss in deposit balances) by continuously identifying high-risk customers

RESULTS

- **\$80mn balance build (>25%) achieved within 60 days** through continuously refined retention campaigns, with ongoing discovery of over 5,000 intelligent insights and approximately 300 niche customer segments

APPROACH

- Deployed hypothesis generation that **continuously evaluated millions of possibilities**
- Leveraged intelligent features to identify and track evolving customer micro-segments
- Implemented automated data ingestion to ensure models reflected current conditions
- Created 30+ adaptive segmented models across 3 portfolios that improved with each iteration

Collections Optimization | Segmenting Risk Profile Interventions

SPARK ✦ BEYOND

Improve bounce rates by 4% and optimizing collection field visits via segmentation



CHALLENGE

- **NBFC** was undergoing a transformation of material shift in business model around collections (**advanced analytics-led, manpower light model**) to capture PBT targets

APPROACH

- Ingests **internal + external data** and live field feedback to uncover drivers, auto-segment accounts, and prescribe tailored contact/treatment strategies.
- Close the loop: Feed performance results back into the model to **re-allocate collectors and refine playbooks** in real time, shrinking pre-delinquency bounces

RESULTS

- Segmentation **converts 73 % of delinquent accounts to low-cost channels**: SMS for 19 % “accidental” bouncers, tele-calling for 54 % early/intermittent strugglers—cutting expensive field visits by > 70 %
- **Field action kept for the riskiest 27 %**: persistent defaulters, seizure-warning cases, and monthly follow-ups—focusing on high-impact recoveries while preserving resources

Loan Compliance & Agent Performance | Autonomous Risk Control

SPARK BEYOND

Reduced cost of credit & enabled pre-emptive action on agent performance



CHALLENGE

- A South East Asian bank needed to replace static predictive models with a system that **could continuously adapt to changing patterns** in loan compliance and agent performance

APPROACH

- The platform continually analyzed 150 variables across 8 categories, **constantly discovering new insights** and updating predictions for loan compliance while simultaneously tracking shifting factors affecting agent performance

RESULTS

Late Payments & Defaults

- **Reduced cost of credit** by dynamically optimizing collection visits by rank-ordering customers (according to their propensity to be late payers) in over a 12-month period

Agent Performance

- **Proactively identified agents whose performance would improve or deteriorate**, enabling pre-emptive action to be taken for each group

Money Mule | Pattern-Learning Security

SPARK  BEYOND

**Multinational
bank identified
mule accounts
with 95%
accuracy**



CHALLENGE

- A leading global bank needed to **replace rigid fraud models** with a solution that automatically adapts to evolving financial crime patterns

APPROACH

- The platform continuously enriched internal data with contextual external sources, **dynamically creating and refining risk clusters** for SME clients

RESULTS

Implemented an alert system that autonomously updates monthly with **95% accuracy based on emerging patterns such as:**

- At least 7 transactions with amount higher than 30K
- Most frequent operation on the account is transfer to other accounts
- Most frequent title of transaction is "transfer to own account"

Risk Scoring | Serving “Thin-file” Customers

SPARK  BEYOND

**8x more
accurate risk
models enabled
access to new,
underserved
customer
segments.**



CHALLENGE

- The bank wanted to serve a new segment of “**un-lendable**” **applicants**
- Existing models were not suitable for this **digital-first challenger bank**

APPROACH

- Connected siloed internal and external datasets using SparkBeyond
- Discovered **50M+ risk patterns** to train more accurate models

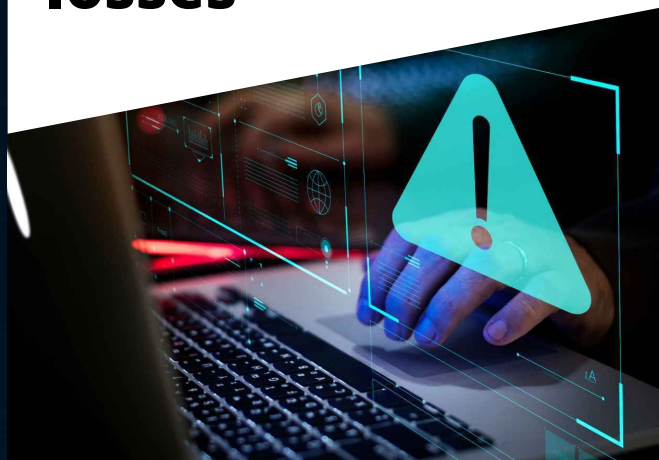
RESULTS

- Achieved models **8x more accurate** than previous ones
- Enabled entry into **previously unlendable segments**

Fraud & Financial Crime | Adaptive Safeguards

SPARK BEYOND

**Fraud detection
& prevention
mitigates 8% of
total fraud
losses**



CHALLENGE

- A top US-based prepaid card company needed to replace their static rule-based engine with a system that could continuously adapt to evolving fraud patterns

APPROACH

- SparkBeyond platform constantly ingested anonymized customer data, developing predictive models that **automatically adjusted to new fraud patterns** without requiring manual updates

RESULTS

- The continuously evolving fraud detection capabilities drove **10x ROI within 6 months** addressing **>\$30M** in fraudulent cases
- **8% of total fraud losses were mitigated** through daily card reissuance based on constantly updating risk assessments

Electronic Fraud | Auto-Refining Protections

SPARK  BEYOND

**European bank
reduces 40%
of undetected
fraud attempts**



CHALLENGE

- A European bank required a fraud prevention system that could **continuously adapt to emerging electronic fraud tactics** without manual intervention

APPROACH

- The platform integrated electronic log data with internal client data to dynamically design and refine fraud detection rules, **automatically back-testing to minimize false positives**

RESULTS

The self-adapting detection rules reduced undetected **fraud attempts were significantly reduced by 40%** with models that continuously evolved to identify new fraud patterns through automatically updated rules - example include:

- More than 2 IPs used in the 24 hours prior to a transaction
- Checking the transaction limit online prior to making a payment
- On transaction day, services added to the account related to payment management

Commodity Price Forecast

SPARK  BEYOND

**New ALPHA
strategies see
25% uplift over
baseline
performance**



CHALLENGE

Commodity Trading with an Oil Major wanted to harness explainable signals

- Quickly identify risk signals and price movements for multiple time horizons
- Target physical and financial markets across commodities

APPROACH

- Leveraging historical trades and weather data (on/offshore) to predict gas price movements
- Leverage trade flows at national/delivery points
- Leverage news and geospatial data sources to increase prediction accuracy

RESULTS

- **Direct PnL increase** related to model performance
- **25% uplift** in model performance over existing ones
- Improved understanding of **market risk and market drivers**
- **Productivity:** Quick turnaround in re-training models for the new geo-political scenarios
- **Trading with new asset classes** by quickly generating interpretable and accurate models

Treasury and Asset Management: Bond Rating Forecast

SPARK BEYOND

Global asset manager predicts ~80% credit rating downgrades

CHALLENGE

This global asset management firm wanted to predict credit rating downgrades across 12,000 listed fixed income assets to drive investment decisions and decrease risk.

- Adjust portfolio positions
- Understand and measure asset performance against hard accounting KPIs

APPROACH

- Drawing on fixed income market data, company financials, macro-economic indicators, and financial news, the automated Feature Discovery allowed rapid testing of millions of time series dependencies with both linear and non-linear approaches.

RESULTS

Produced natural language research insights (feature descriptions) that described key drivers behind predicted downgrades which the investment committee could understand.

Enabled **automatic reporting of downgrade action probabilities for exposure** across energy, industrial, materials, utilities and consumer cyclical/non-cyclical sectors.

Historical backtesting detected

- **€76M increase in provisions**
- **€91M increase in stress on assets**
- **80% of held debt asset downgrades**

Branch Optimization

SPARK  BEYOND

Quantified geo-spatial data driving branch performance



CHALLENGE

- A leading bank in Poland wanted to identify the factors that drove branch performance and set branch targets more accurately based on important factors.

APPROACH

- Integrated internal branch and customer data with external web knowledge to cluster branches, identify performance drivers per cluster and set accurate targets

RESULTS

- Quantified the importance of **geo-spatial data as a factor driving branch performance**
- Identified that despite different branch characteristics (number of clients, type of location), **branch results were driven by sales rep performance**
- This insight enabled the bank to set more realistic individual targets per branch

A person's hands are shown holding a glowing digital network of nodes and lines, symbolizing technology and connectivity. The background is dark with a grid pattern and various digital elements like arrows and data points. The text "Thank You" is prominently displayed in the center.

Thank You

SPARK  BEYOND