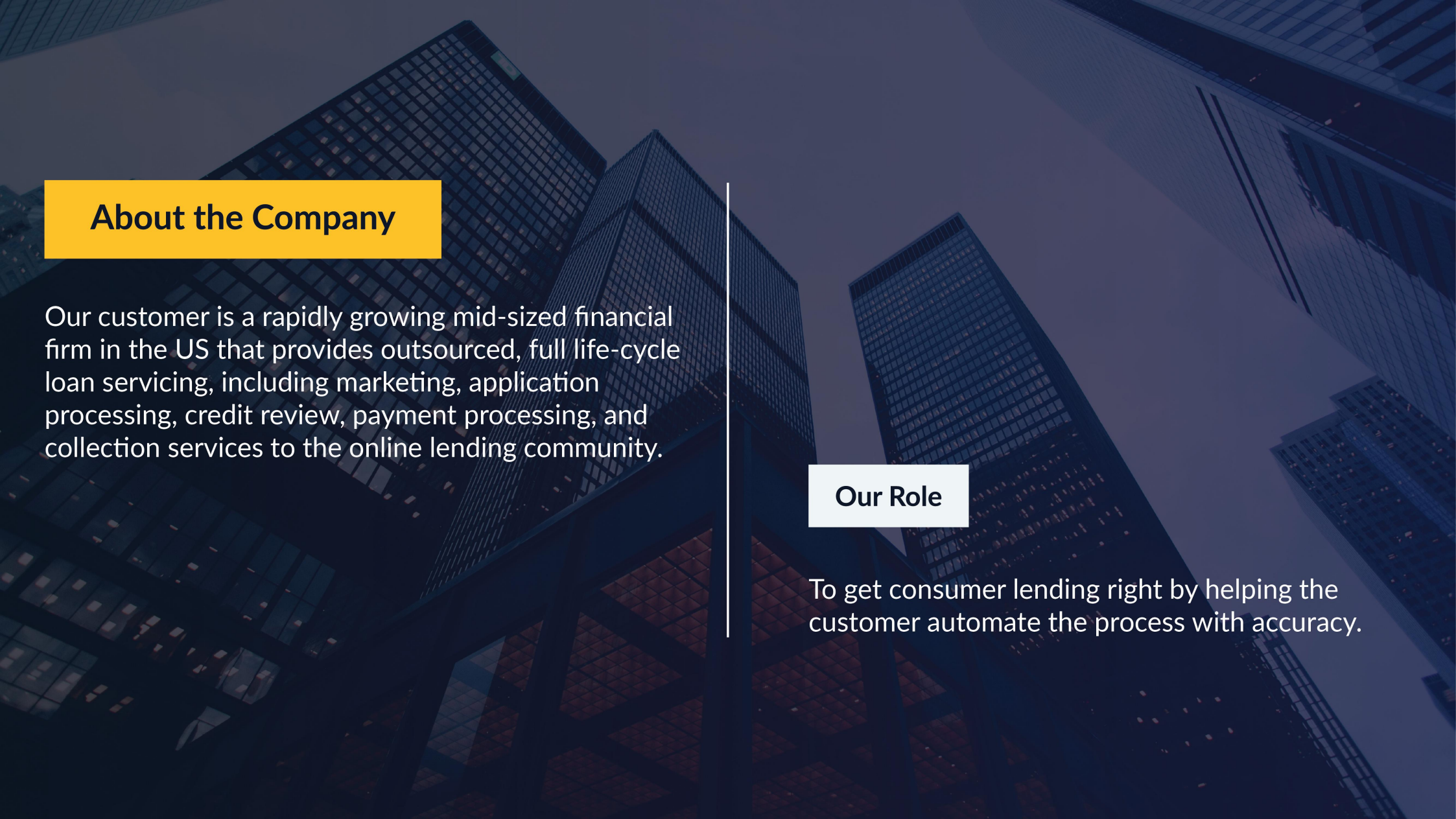
ZUCI SYSTEMS

HALO

How **HALO** helped automate underwriting for a financial institution in South Dakota

www.zucisystems.com



About the Company

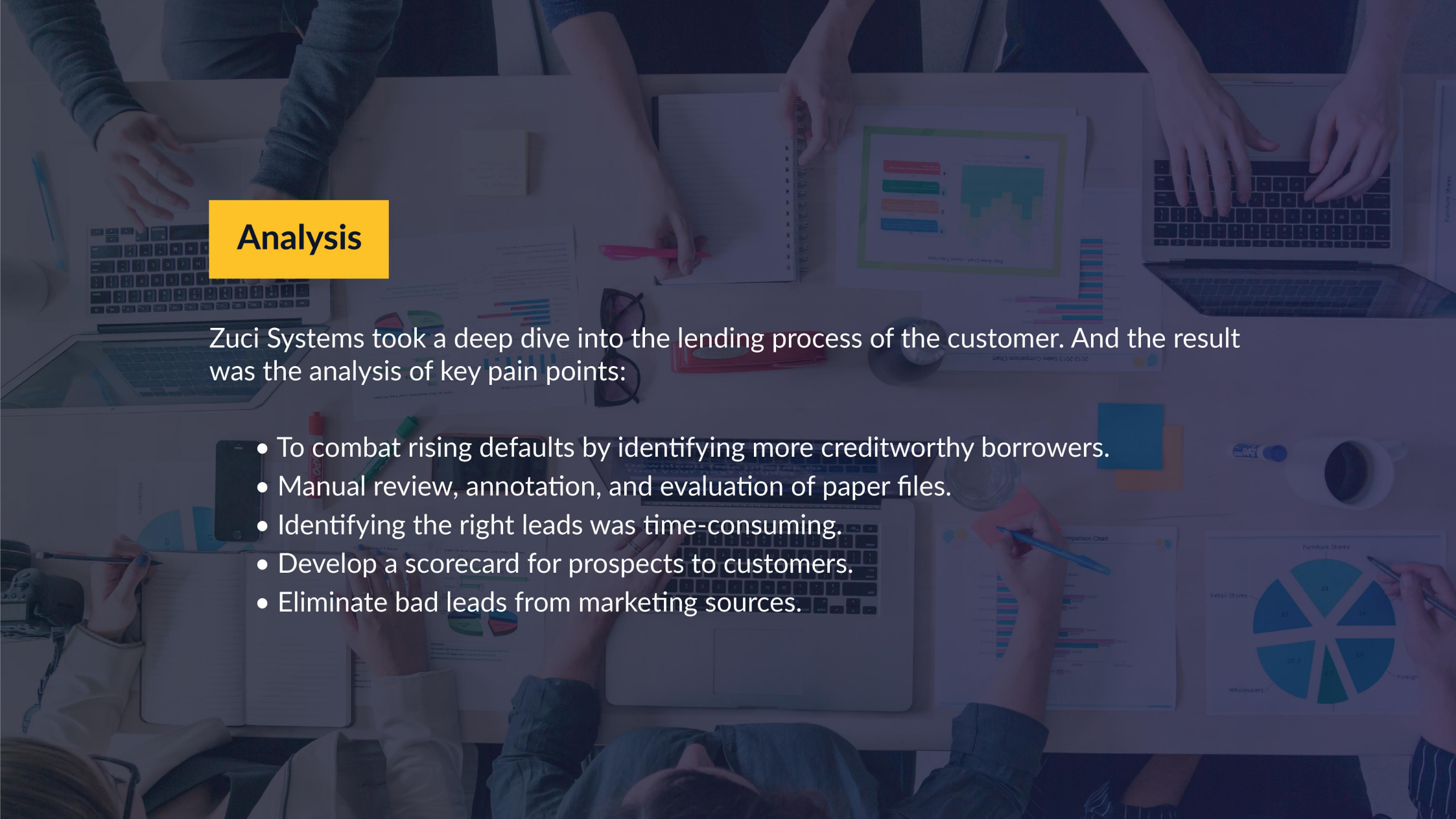
Our customer is a rapidly growing mid-sized financial firm in the US that provides outsourced, full life-cycle loan servicing, including marketing, application processing, credit review, payment processing, and collection services to the online lending community.

Our Role

To get consumer lending right by helping the customer automate the process with accuracy.

Business Challenge

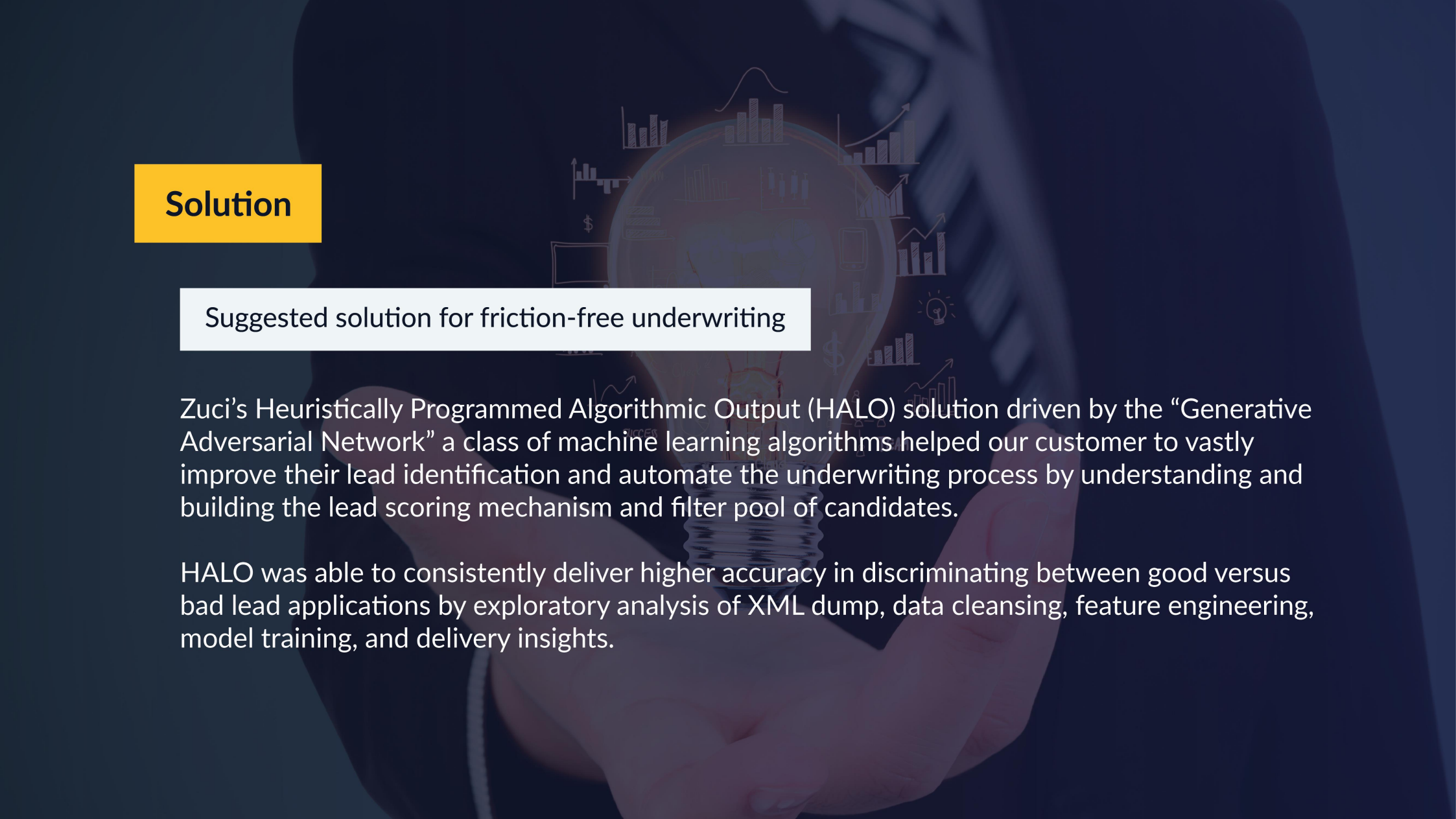
The client's identification of viable loan prospect bids was based on tacit knowledge and was expensive ($50 to $150 per successful bid). The client wanted a new approach to credit decisioning that would help reduce portfolio risk without sacrificing approvals and make new loans to paid leads and hard-to-score borrowers.



Analysis

Zuci Systems took a deep dive into the lending process of the customer. And the result was the analysis of key pain points:

- To combat rising defaults by identifying more creditworthy borrowers.
- Manual review, annotation, and evaluation of paper files.
- Identifying the right leads was time-consuming.
- Develop a scorecard for prospects to customers.
- Eliminate bad leads from marketing sources.

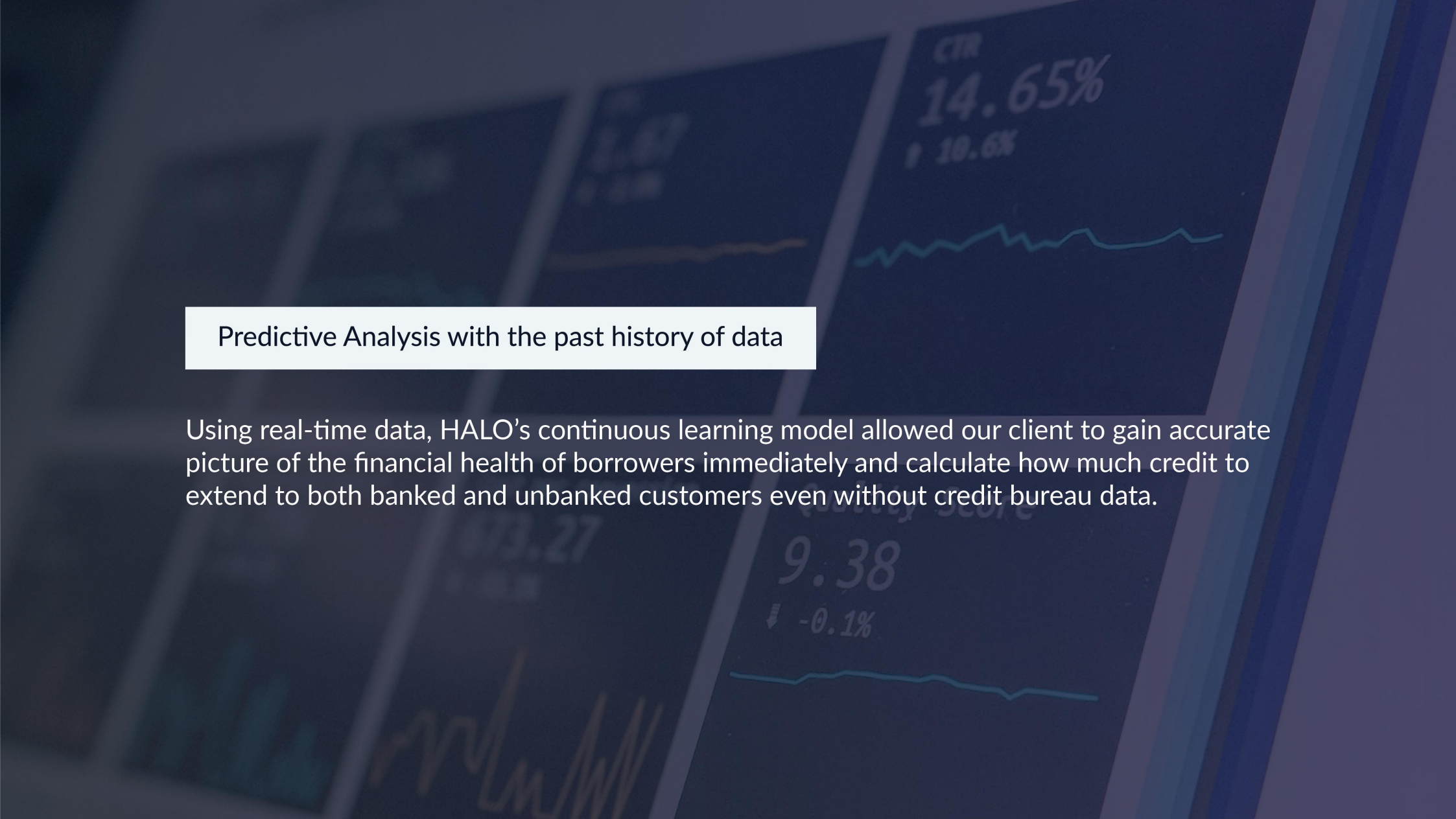


Solution

Suggested solution for friction-free underwriting

Zuci's Heuristically Programmed Algorithmic Output (HALO) solution driven by the "Generative Adversarial Network" a class of machine learning algorithms helped our customer to vastly improve their lead identification and automate the underwriting process by understanding and building the lead scoring mechanism and filter pool of candidates.

HALO was able to consistently deliver higher accuracy in discriminating between good versus bad lead applications by exploratory analysis of XML dump, data cleansing, feature engineering, model training, and delivery insights.



Predictive Analysis with the past history of data

Using real-time data, HALO's continuous learning model allowed our client to gain accurate picture of the financial health of borrowers immediately and calculate how much credit to extend to both banked and unbanked customers even without credit bureau data.

Proposed a scoring model

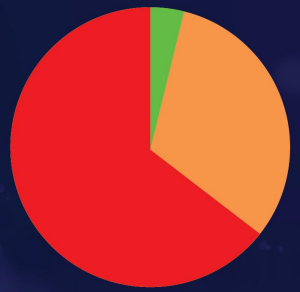
GAN (Generative Adversarial Network): Outcomes Expectation

Algorithm 1 (Lead to Prospect) Outcomes

Zuci Algorithm Result- 1000 Customers

	164	18	23	47	748
Approved	2	0	0	1	10
Pending	63	9	7	20	274
Collection	0	0	1	2	5
Declined	38	5	6	10	216
Withdrawn	61	4	9	14	243

Outcome



Prospect to Customer (Algorithm 2)

Lead to Prospect (Algorithm 1) \ Prospect to Customer (Algorithm 2)	Good			Poor
Good	SA	A	R	R
	SA	A	R	R
	R	R	SR	SR
	R	R	SR	SR
Poor	R	R	SR	SR

SA- Strongly Accept A- Accept R- Review SR- Strongly Reject

Results

HALO was able to help the customer improve the overall underwriting productivity by 30%.

Stats

30%
reduction in lead generation cost both operational and procurement.

18%
increase in approvals.

75%
improved process turnaround time.

Solution deployed in **19** weeks.

Tech Stack: Python, Apache, JVM, Low-code Basics, Rest-assured

Here's what our client had to say

"The HALO solution is set up to learn on its own, without the need for manual adjustment to the rules. Zuci's team built this model based on lead, applicant, and consumer historical data with the ability to self-train and re-train itself based on any updated data received by the system.

Zuci Systems helped significantly improve lead rejection accuracy and lead selection accuracy within 6 months of implementation. We are confident that HALO will continue to provide us with significant improvements over time.

James C. Jacobson
President at First Financial Service Center

Looking to ease the lending process at your financial institution? **Talk to Us!**

ZUCI SYSTEMS

Learn More →

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