Getting to the "Best Yes"

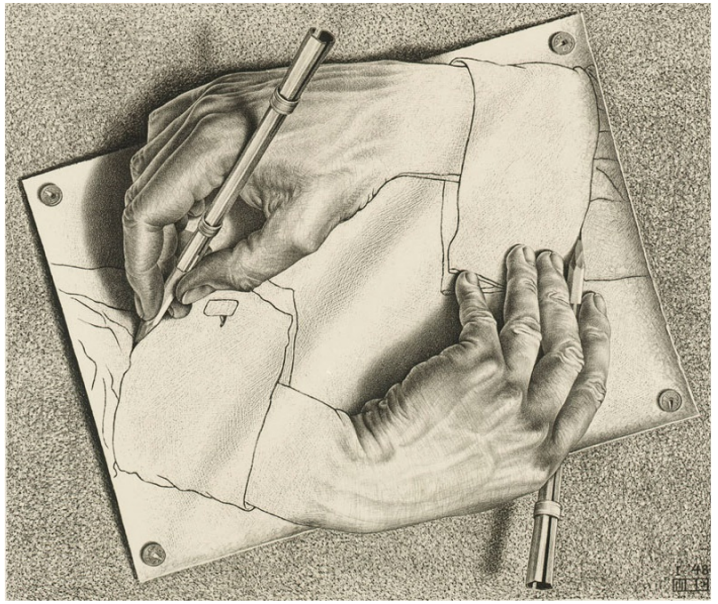
Verde Aurora™, Corona™ & Allele™

Underwriting, Pricing & Management Systems

VERDE LENDING SOLUTIONS

AI Systems for Loan Underwriting, Pricing & Customer Management

- **Verde Builds Best in Class AI Systems for:**
  - **Underwriting, Pricing & Customer Management**
- **Solutions Adapted for Your Markets & Requirements**
  - **Cost: Affordable, Far Below Traditional Processes**
  - **Performance: Always Beats the Competition**
- **Creates Value for:**
  - **Lenders,**
  - **Borrowers,**
  - **Partners,**
  - **Communities**
  - **Anywhere**



Verde *uses* Intelligent systems to *build* intelligent systems
Driving Down Costs • Driving Up Performance

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VERDE AURORA™ & CORONA™

Automated AI Loan Origination, Underwriting & Pricing

Verde™ INTERNATIONAL

Whether…

BIG

or small

Conventional Underwriting Practice

While underwriting $1.4 trillion over 28 years, I've learned a few things about lending.

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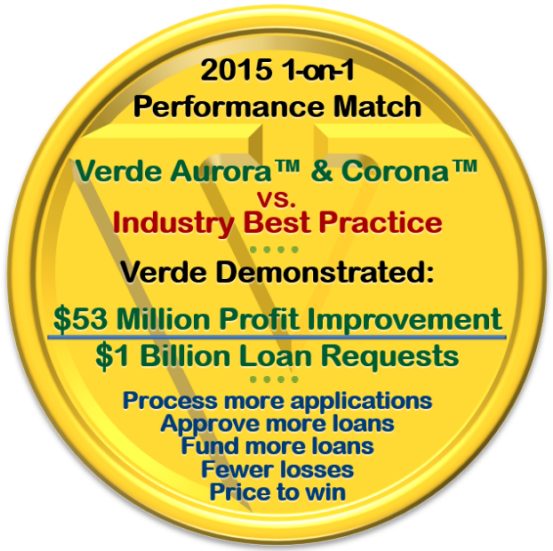

Verde Aurora & Corona solve each with

- ✓ **Big Data** — 10,000 Series Many Sources
- ✓ **Automation** — 99.6% Full Auto
- ✓ **Best Models** — 5X Better
- ✓ **Optimal Pricing** — Best Yes

BASEL III
ANY LENDER
ANYWHERE
ALL THE TIME

While underwriting $1.4 trillion over 28 years, I've learned a few things about lending.

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ADVANCED UNDERWRITING
Conventional Underwriting vs. Verde Aurora™

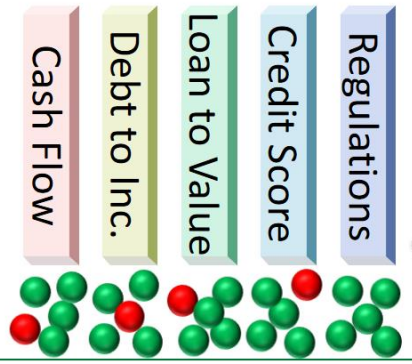
Verde INTERNATIONAL

Conventional Underwriting

- **Pass/fail filters used to avoid bad loans.**
- **This approach has major limitations:**
  - No prediction of Probability of Default
  - No prediction of Loss Given Default
  - No prediction of Loan Life Cash Flows
  - No prediction of Profitability
  - Poor Pricing = Wasted Opportunity

Decline

Pass/Fail Criteria

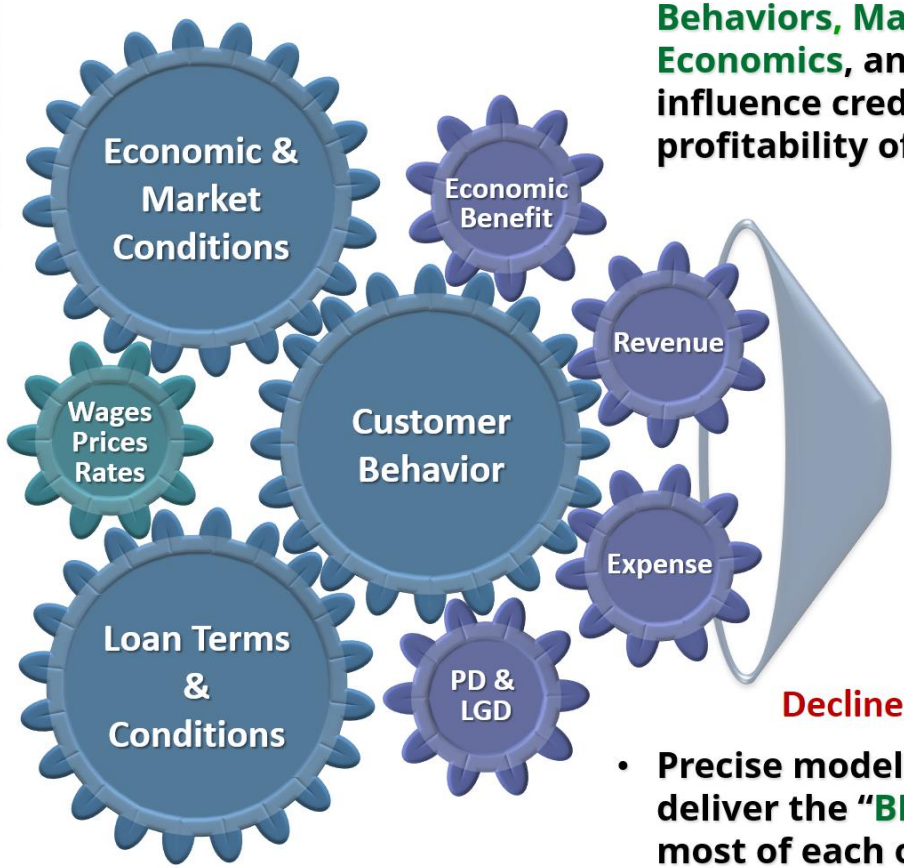


Underwriter Opinion

Approve

Verde Aurora™

- **Aurora AI knows how Customer Behaviors, Market and Business Economics, and Loan Terms all influence credit performance & profitability of every loan.**



Approve

Decline

- **Precise models and optimized offers deliver the "BEST YES", making the most of each opportunity.**

PD✓ LGD✓ Cash Flows✓ Profits✓ Most Opportunity✓ Basel III AA✓

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VERDE AURORA™ FORECAST PERFORMANCE

Aurora Outperforms the Next Best Model by 5x

Aurora delivers comprehensive, objective and accurate forecasts that drive:

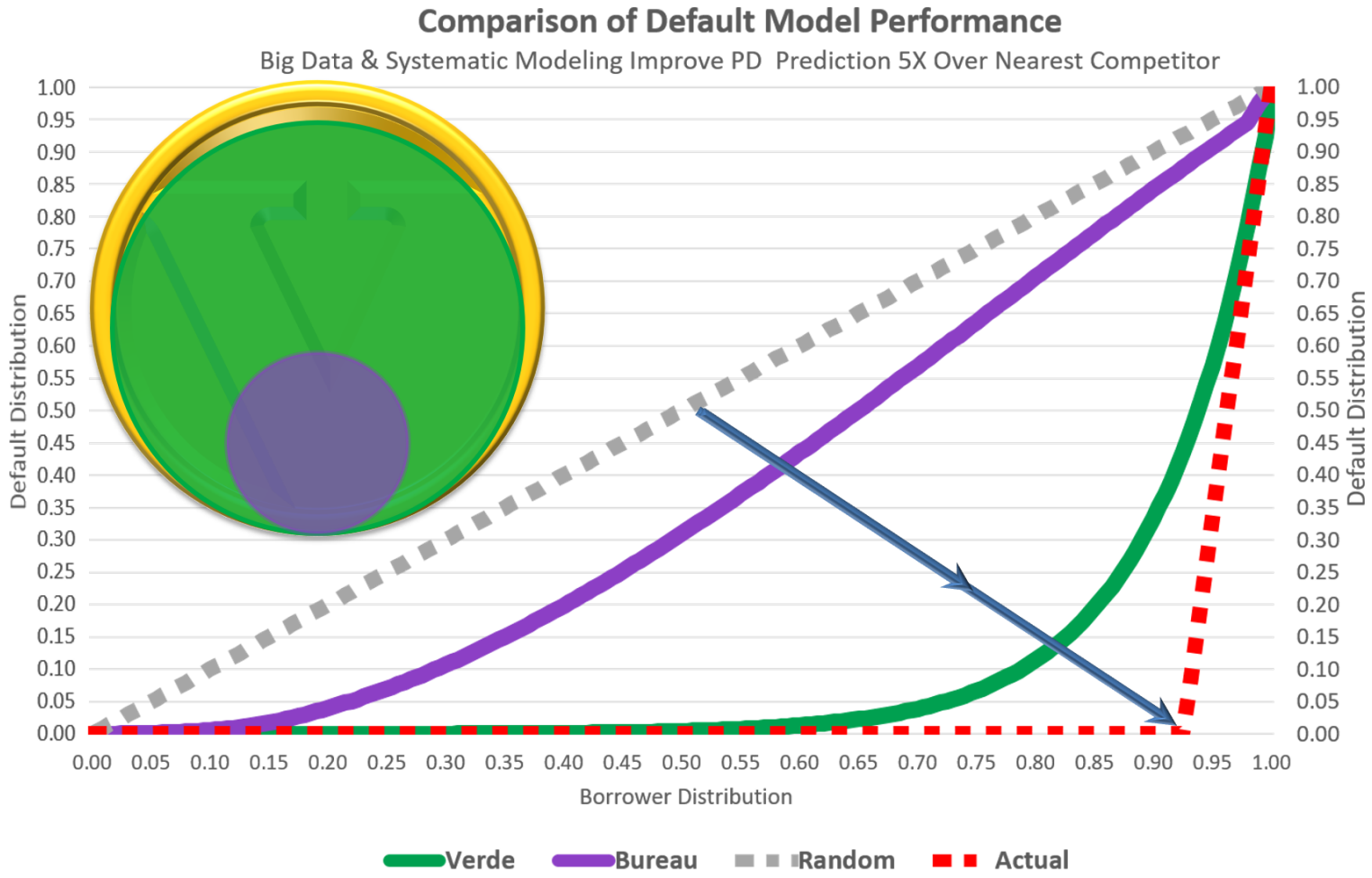
- **Higher Approval Rates**
- **Greater Inclusion**
- **Higher Capital Flow**
- **Lower Losses**
- **More Favorable Pricing**
- **Better Lender Returns**
- **Greater Economic Development**

That's getting to "the best YES!"

Yes! for the Borrower

Yes! for the Lender

Yes! for the Community



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VERDE AURORA™ FORECAST PERFORMANCE

Aurora Outperforms the Next Best Model by 5x

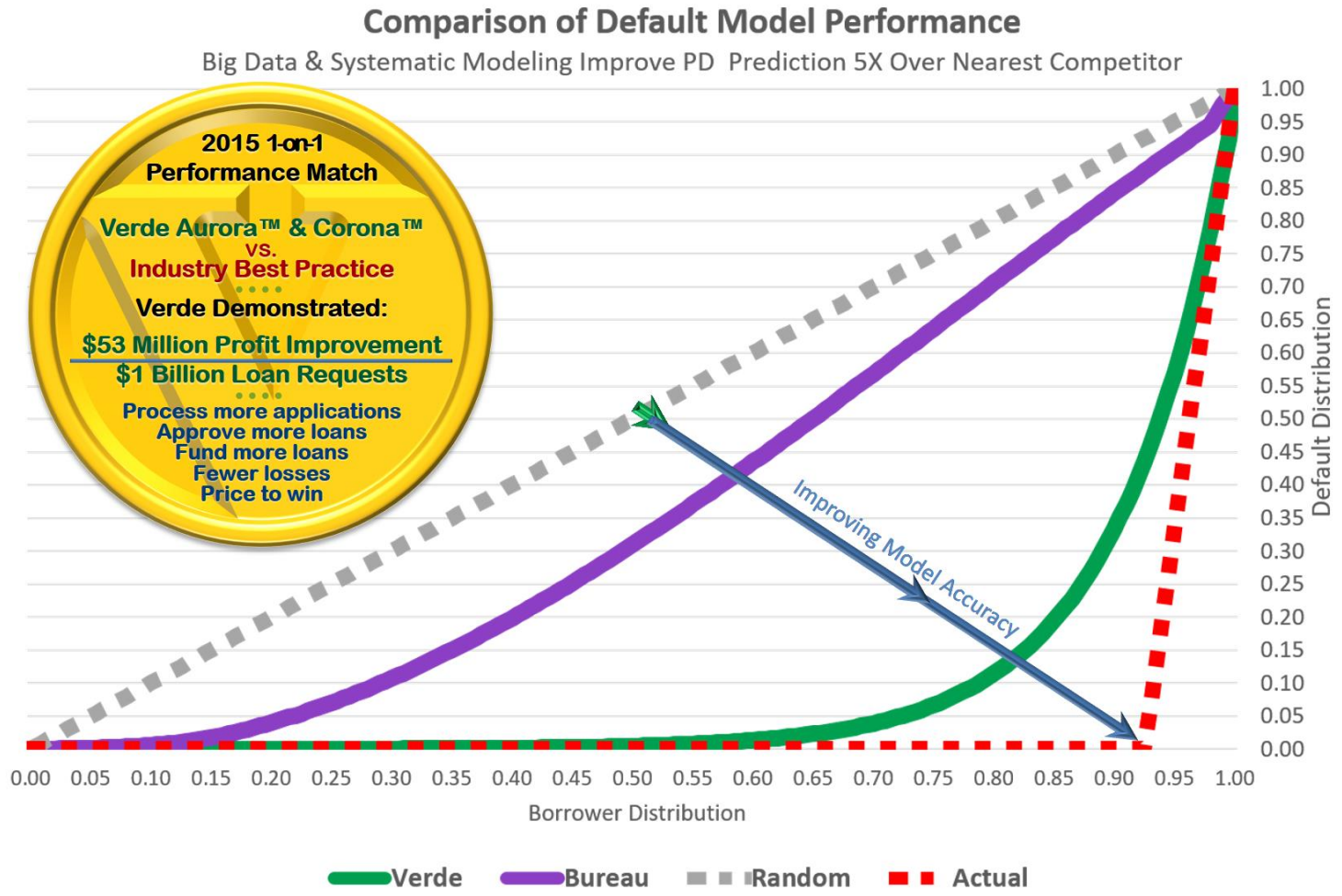
Great financial forecasts, optimal pricing and best use of capital are impossible without accurate loan loss and cash flow projections.

For a typical $1B installment loan portfolio, the difference between underwriting with Verde's PD model (green) and the traditional bureau-based model (purple) is about $25MM profit improvement.

Automation and offer / counteroffer optimization contribute $28MM for a $53MM total profit improvement over the loan term.

How to Read a Lorenz Curve

- Credit model performance can be compared using Lorenz curves.
- The graph compares any model to two extremes:
  - Random Guess (grey) is a naïve forecast, assuming the average.
  - Actuals (red) is the best you can do, a perfect prediction.
- The area between grey and purple is the benefit of the Bureau score.
- The area between grey and green is the benefit of the Verde score.
- The difference is the *Verde Advantage*.



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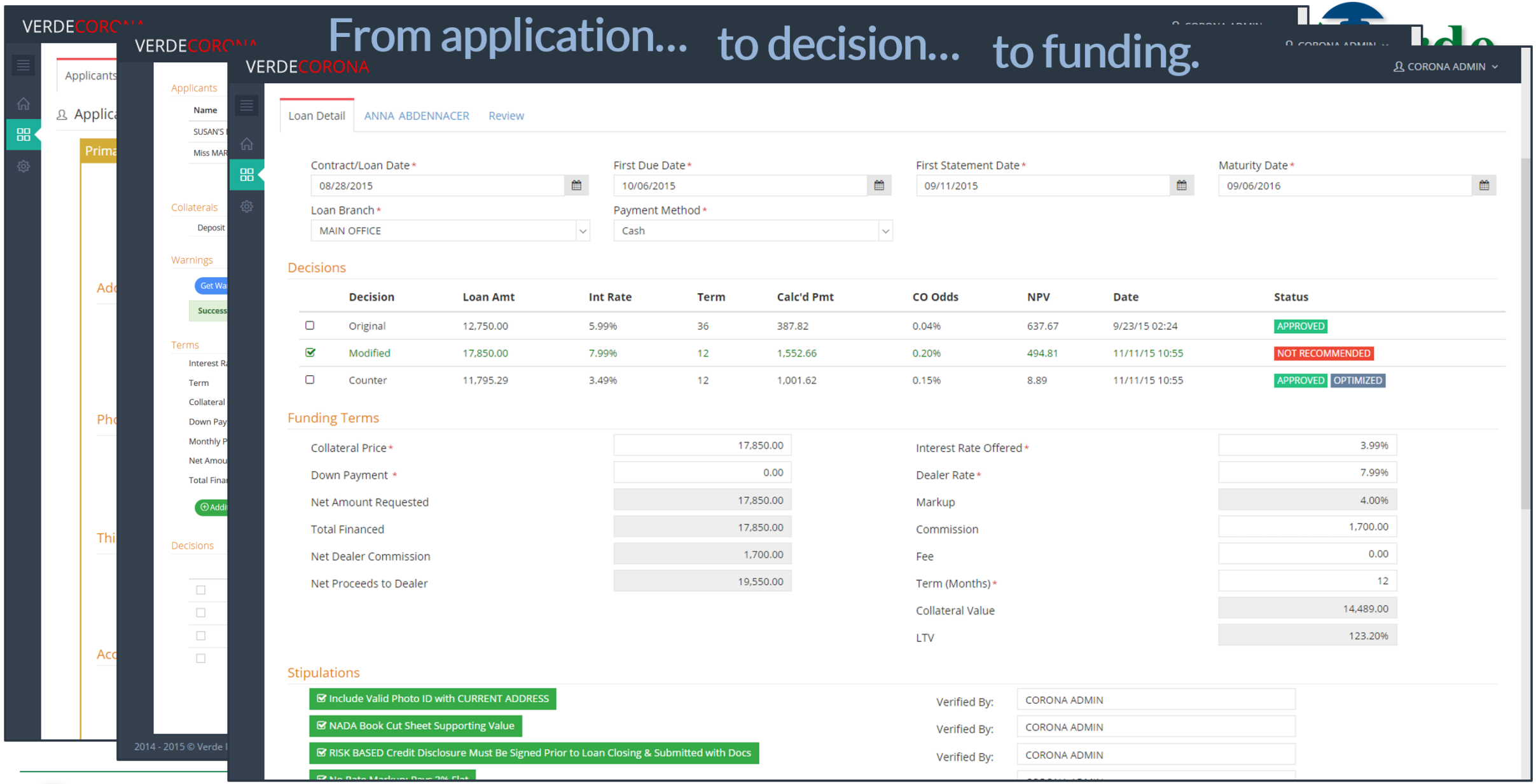
From application… to decision… to funding.



So simple & in just seconds, we get you to "the best YES".

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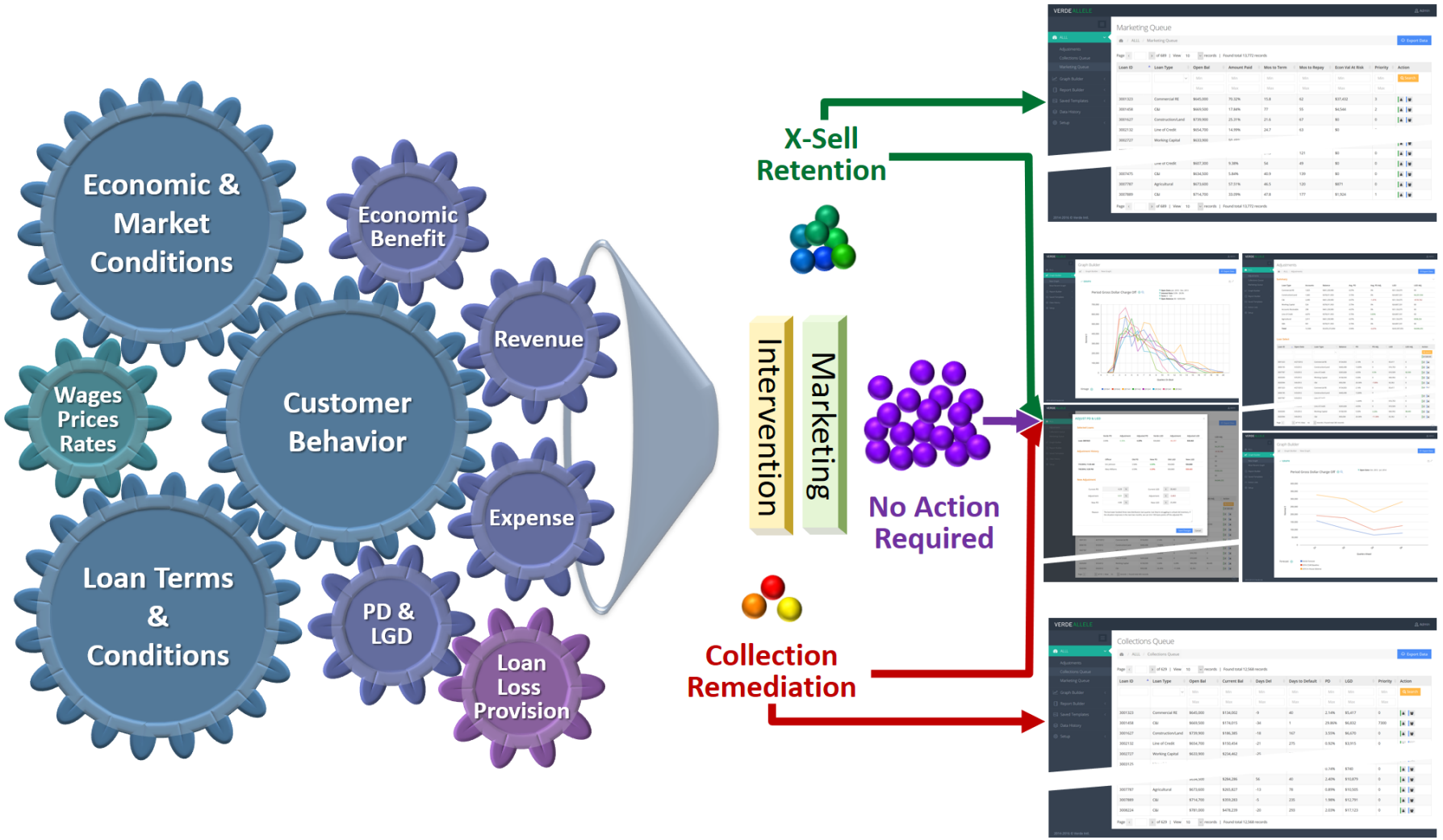
VERDE ALLELE™ Loan-Level Forecasting & Account Management

Make the Most of Existing Loan Relationships

- **Loan Loss Provisioning**
- **Continuous Customer Monitoring & Valuation**
- **Targeting for Customer Management, Marketing, Collections**



Loan Loss Provision • Stress Testing • Account & Portfolio Valuation • Strategic Planning • Market Assessment

X-Sell • Activation • Retention • Deposit Capture • Reminders • Collections • Pre-Delinquency Intervention

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VERDE LENDING SOLUTIONS

AI Systems for Loan Underwriting, Pricing & Customer Management

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Unbeaten Performance
5X More Accurate Than Next Best

Full Financial Forecast on Every Loan
PD, LGD, NPV, Monthly Cash Flows

Instant Decisions, Pricing &
Counter Offers

100% Policy & Regulation
Enforcement

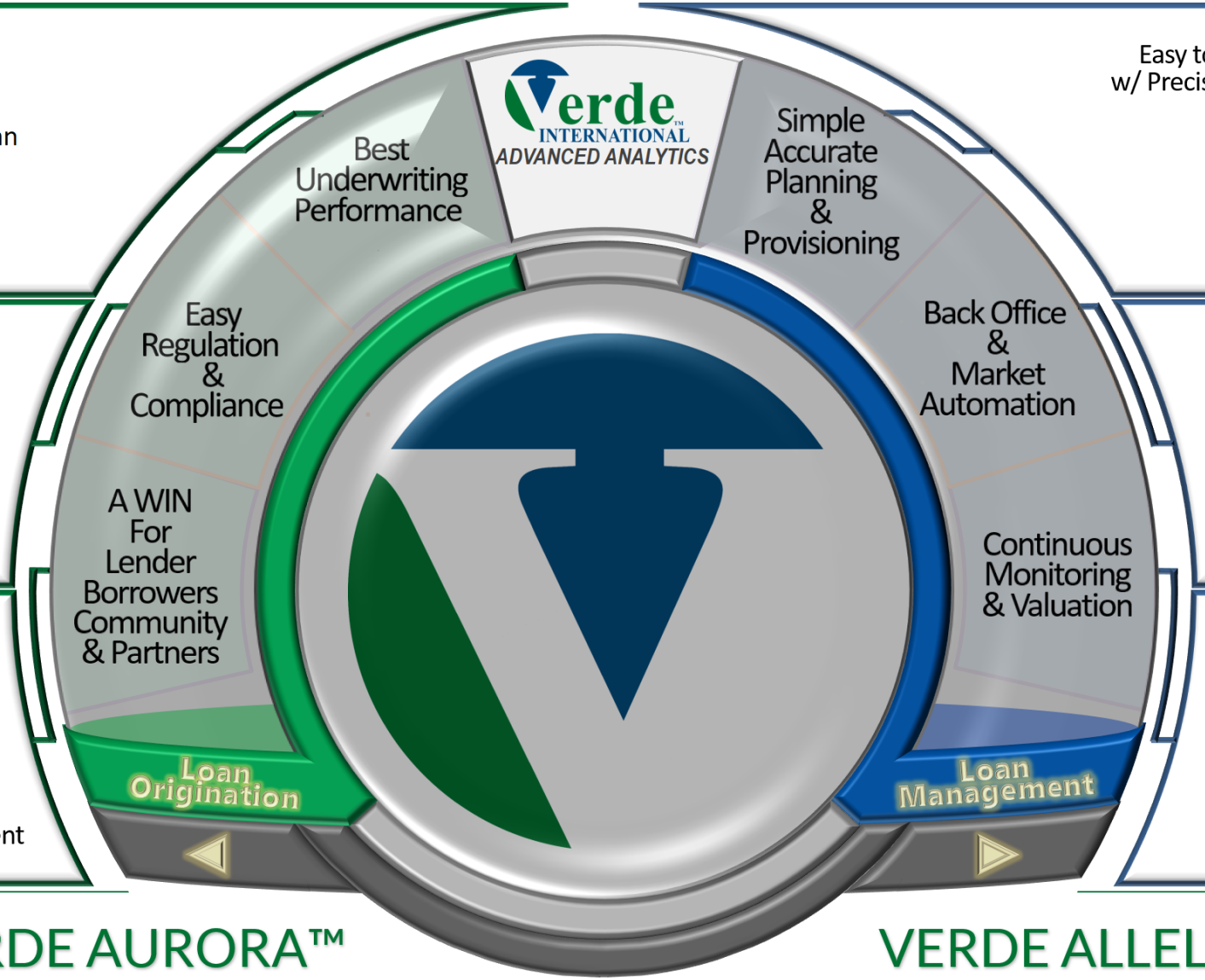
Loan-Level Validation of
Fairness & Inclusion

Basel III Advanced Approach w/
Integrated Stress Testing

AI-Driven Systems
Maximize Relationship Value

Fund More w/ Higher Returns
& Greater Certainty

Win-Wins w/ Certain Returns
Maximize Capital Flow & Development



Easy to Use, Adapted to Your Requirements
w/ Precision of Verde's Econometric AI Engine

Loan-level Loss Provision &
Financial Pro Formas

Full Scenario & Stress Testing
w/ Analysis Sandbox

Target and Prioritize Customers
X-Sell, Retention, Build Deposits

Drive Collection Strategies
w/ Daily Priority Queues

Trigger Process & Data Requests
at Loan & Segment Levels

Projections for Each & Every Loan
on Schedule or on Demand

Projections Change w/
Markets & Customers

Real-Time Alerts to Select Staff
w/ Integrated Feedback & Tracking

VERDE AURORA™

VERDE ALLELE™

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VERDE AURORA™, CORONA™ & ALLELE
FAQs

Where do you get your data?

From everywhere. Each market is unique.

More Sources = Better Models.

Verde builds automated connections.

What loan types are supported?

Microfinance, Consumer & SME loans and lines.

Will it work for a lender my size?

Yes!

Will it work in my market?

Is it on Earth?...Yes!

Can I get to my data?

Your data is always available. 100% of it.

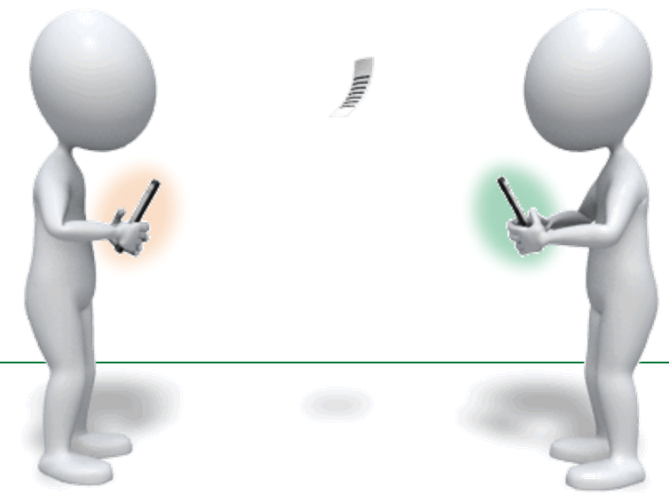
Access is free & unlimited via reports, SQL queries.

How do I access Aurora and Corona?

Over the Web or installed on your own hardware.

Is my data secure?

Your data is encrypted in transit & in the database.



Can it integrate with my other systems?

Yes!

How much does it cost?

Typically, about 1/3 of what you pay today.

There's a setup fee, then we charge based on use.

Are the models generic? The same for everyone?

Models are optimized for your specific situation.

For max performance, we build them unique to you.

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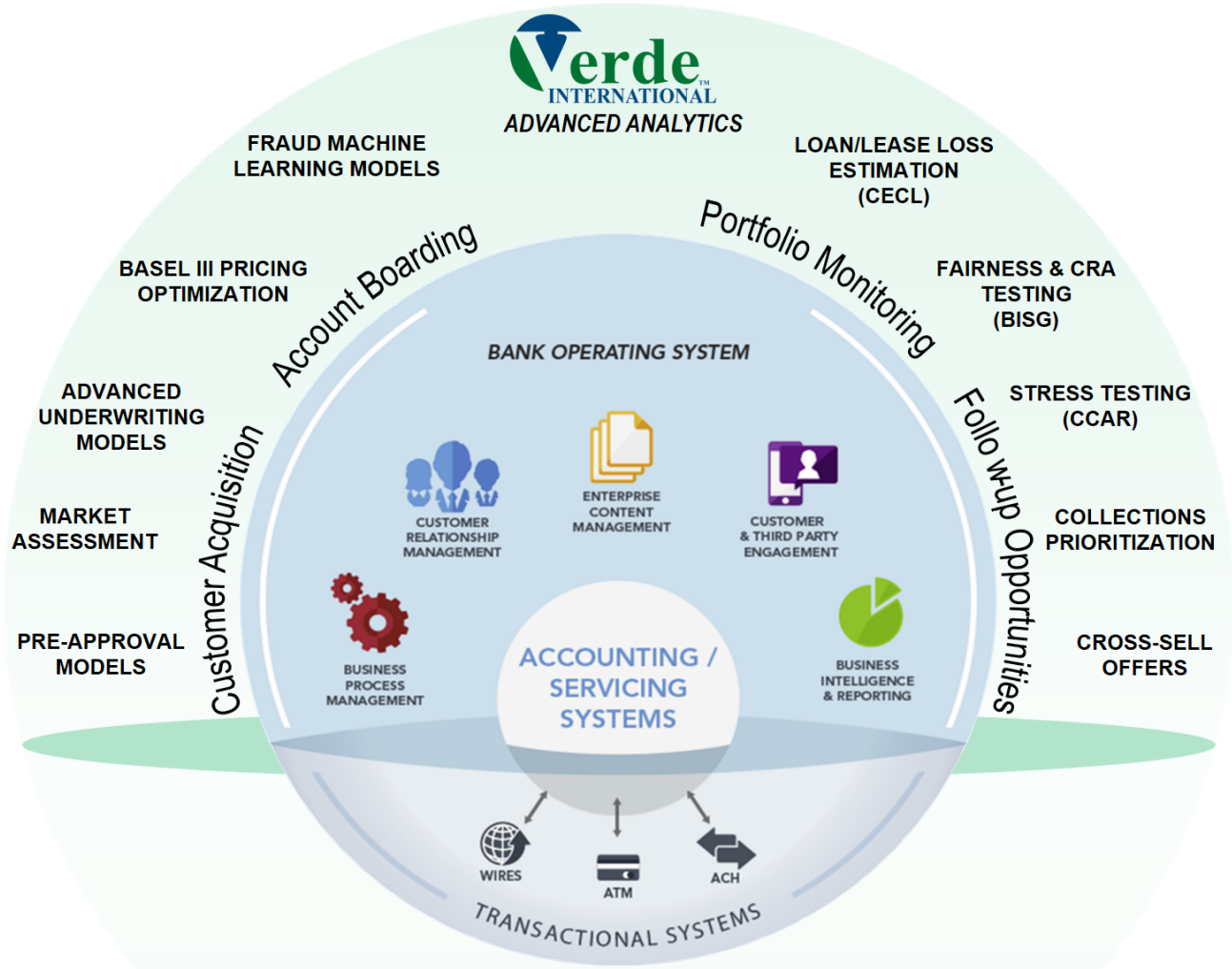
VERDE SOLUTIONS

Overview of Verde Analytics & Decision Systems

At origination and throughout the account & relationship life, Verde provides industry leading risk and financial performance management analytics and automated decision solutions that can be fully integrated with your existing business operations and workflow.

Aurora™ and Allele™ can work with your existing core, LOS, data interfaces and, as needed, independently capture additional external data to improve decision making.



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Verde Aurora™ & Corona™

Loan Underwriting For Consumer & SME Detail

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VERDE AURORA™ & CORONA™
LOAN ORIGINATION SOLUTIONS

- VERDE AURORA™ is a **fully automated advanced underwriting decision engine** and **offer optimization system**. For fintech companies and third-party processors, a decision engine is usually little more than a decision tree.

- VERDE AURORA™ rivals the best bureau credit scoring with **Basel III Advanced Approach forecasting** providing **PD**, **LGD**, **cash flows**, and **profitability**. Decisions are **instant**, along with **optimized counter offers**.

- VERDE CORONA™ is a **Windows-based, advanced loan origination system** that provides **system-to-system**, **third-party**, and **application interfaces**, **database** and **system of record functions**, and a suite of **reporting**, **analysis** and **administrative tools**.

- VERDE AURORA™ & CORONA™ can be delivered **behind the client's firewall** or as **software as a service** (**SaaS**).

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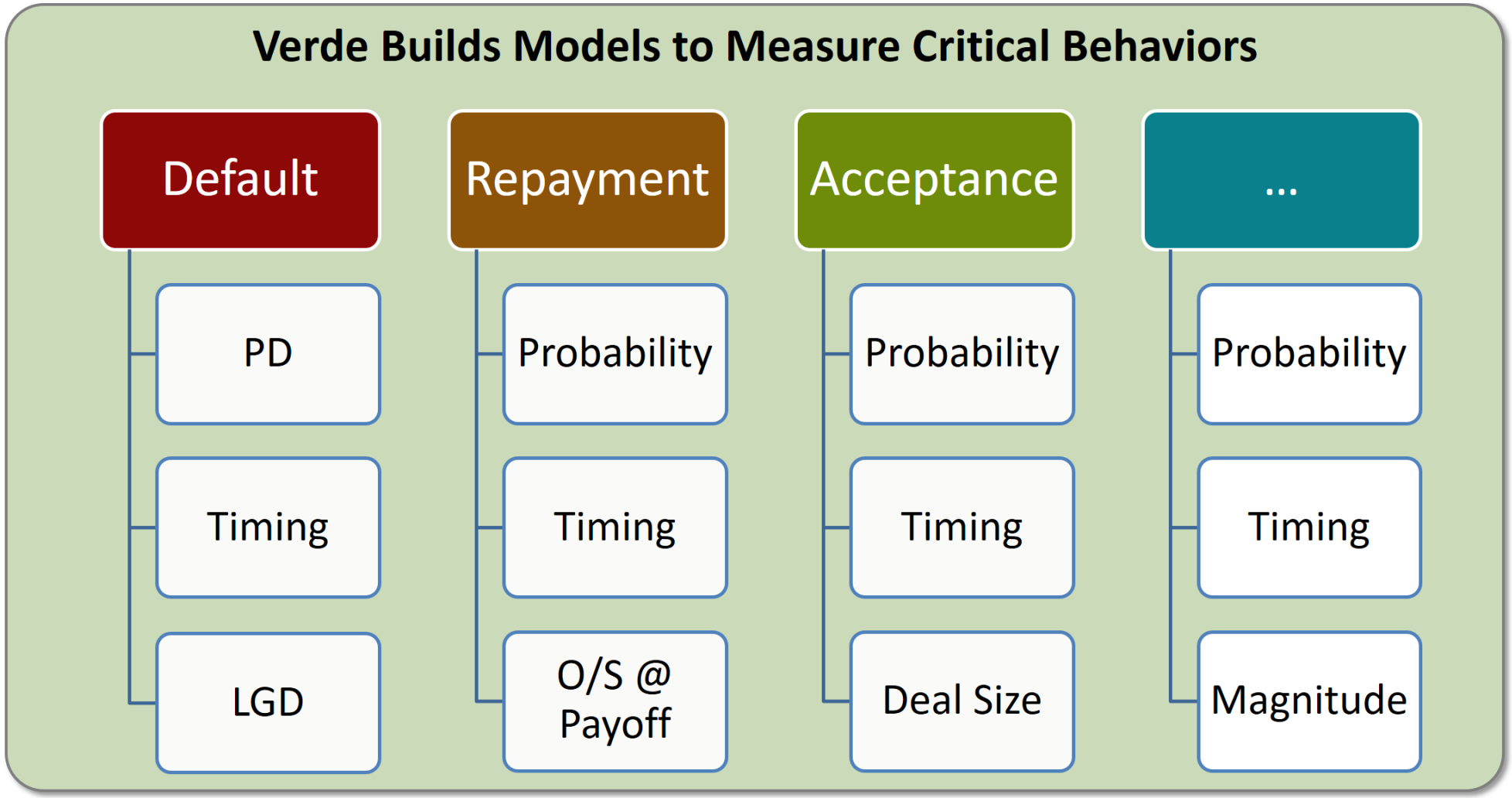
VERDE AURORA™
Behavior Drives Pricing & Pricing Drives Behavior



Fraud | Deposits | Relationship | Soc. Impact

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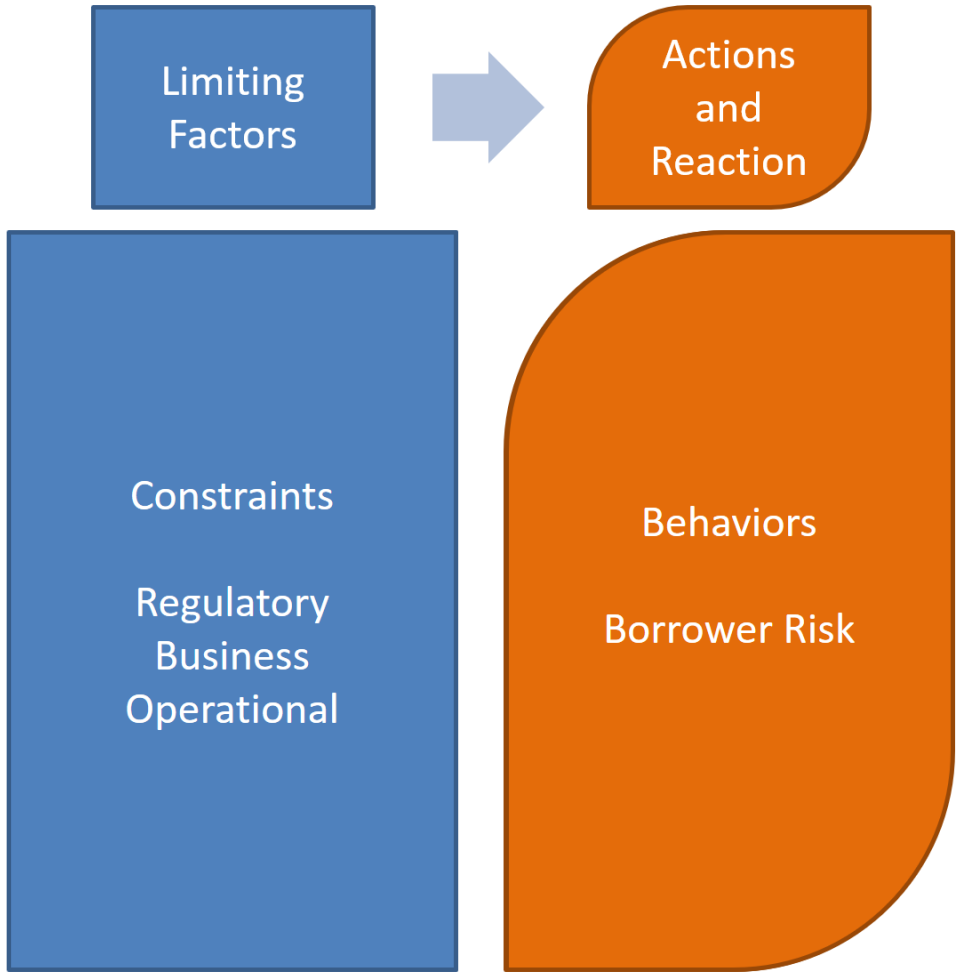
VERDE AURORA™ & CORONA™

Verde's Contextual & Holistic Process vs. Conventional Underwriting



Conventional Underwriting → Limited Understanding = Limited Performance

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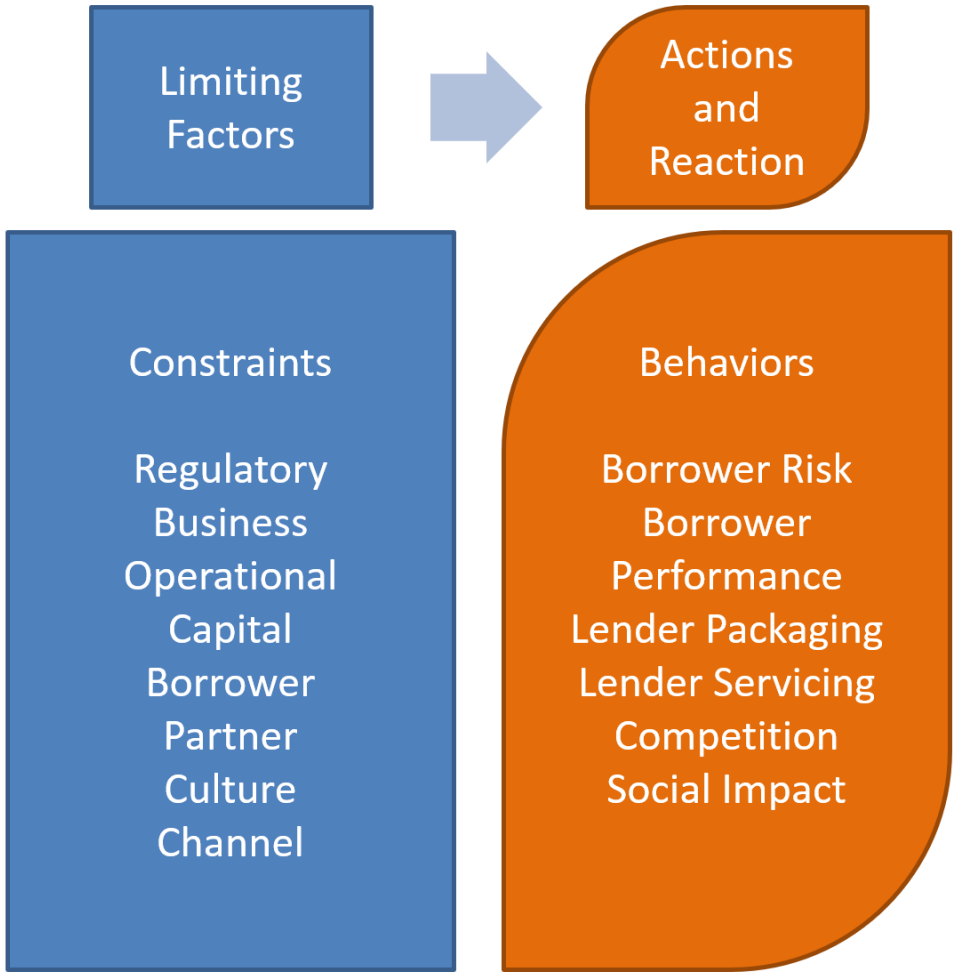
VERDE AURORA™ & CORONA™

Verde's Contextual & Holistic Process vs. Conventional Underwriting



Expanding constraints and behaviors help, but we still lack context and objective.

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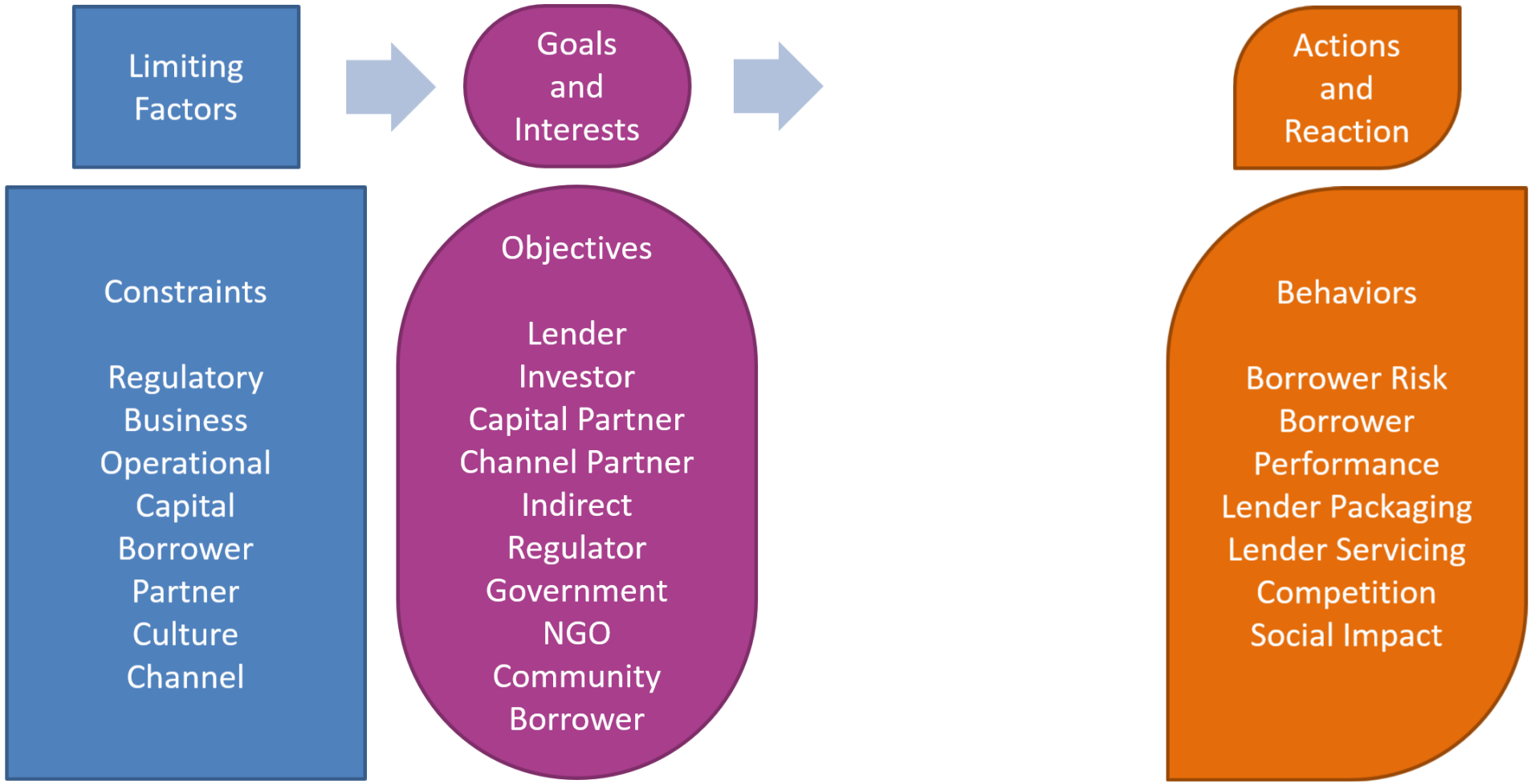
VERDE AURORA™ & CORONA™

Verde's Contextual & Holistic Process vs. Conventional Underwriting



All participants have interests to be satisfied. Some in harmony, some in tension.

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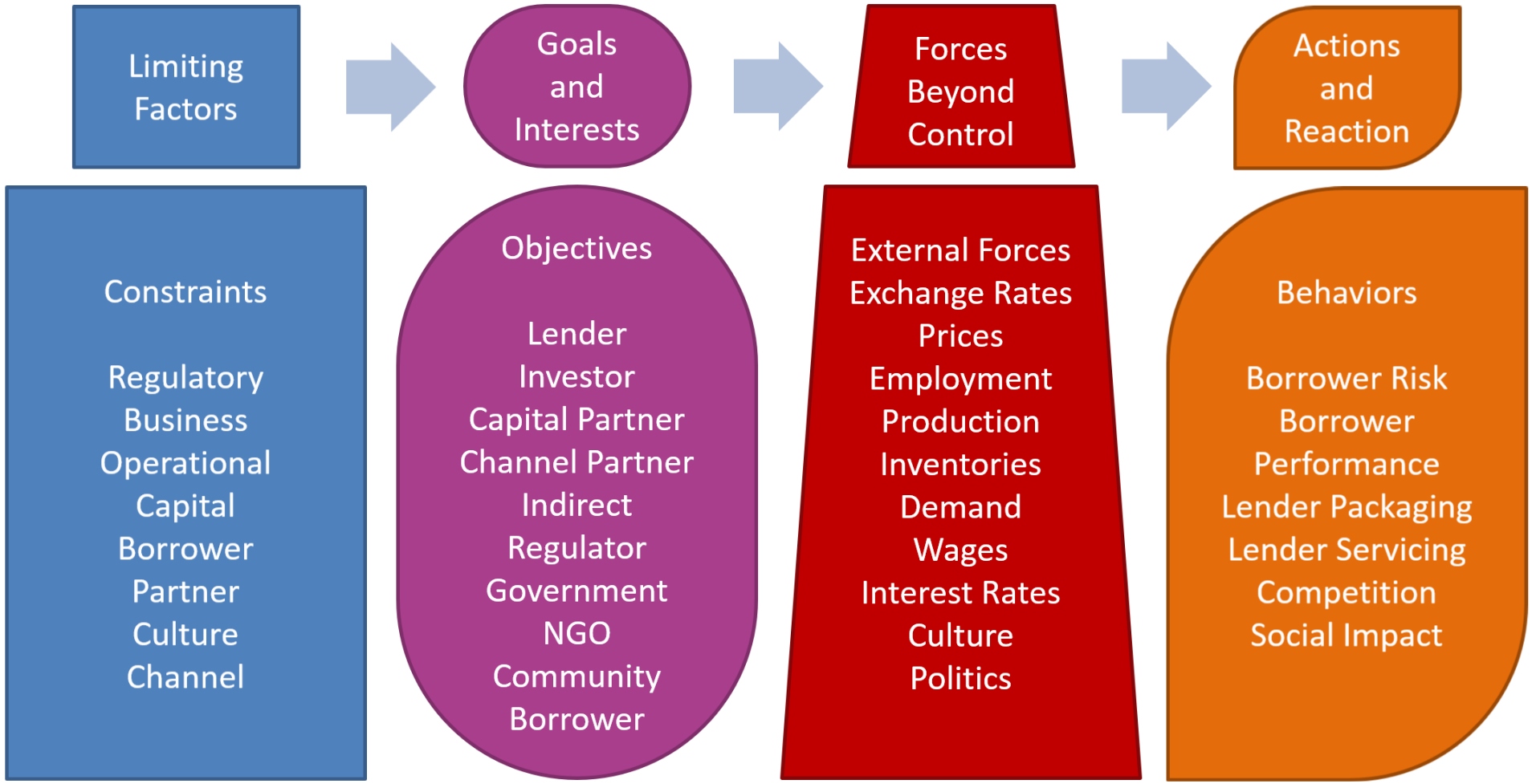
VERDE AURORA™ & CORONA™

Verde's Contextual & Holistic Process vs. Conventional Underwriting



To interpret & forecast behaviors, we need to understand the context or environment.

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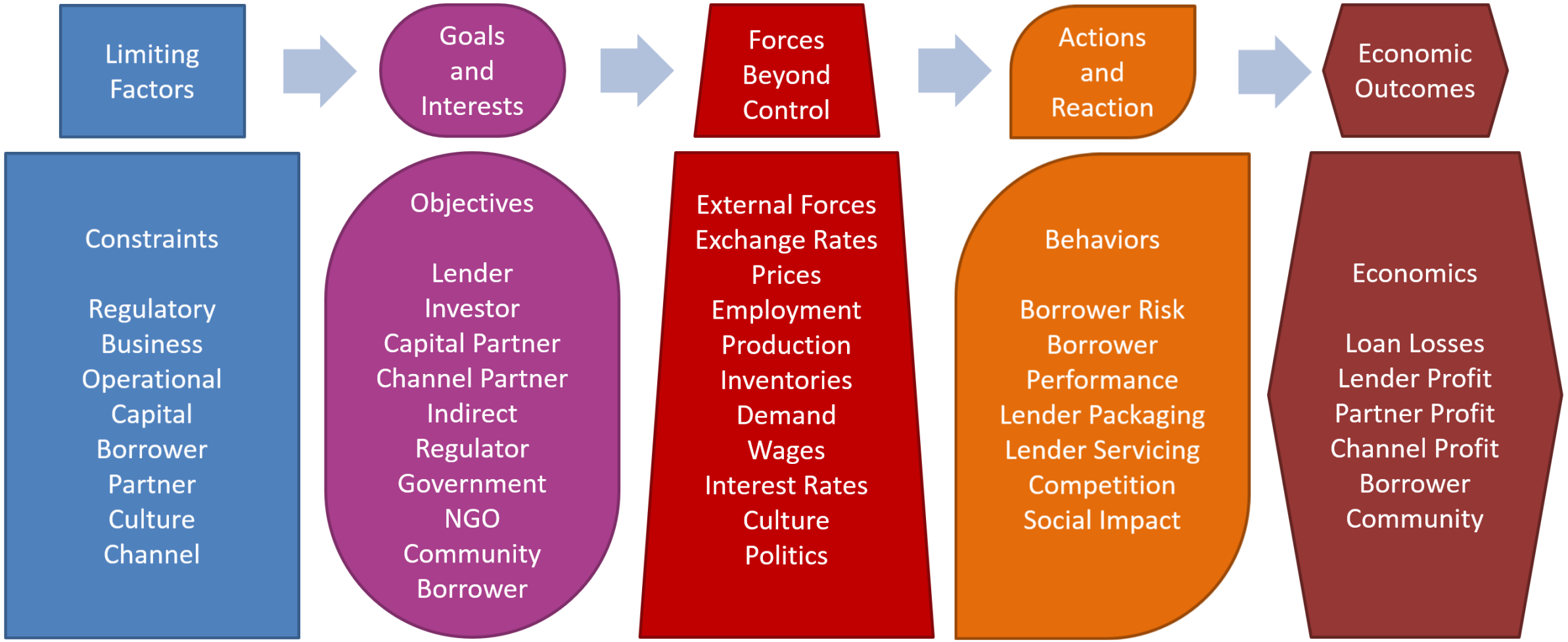
VERDE AURORA™ & CORONA™

Verde's Contextual & Holistic Process vs. Conventional Underwriting



Verde's contextual & holistic process is more accurate, considers all interests and contexts, runs stress and compliance tests, and optimizes the full value proposition.

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VERDE AURORA™ & CORONA™
Systematic View of Decision Dimensionality

Ecosystem Perspective

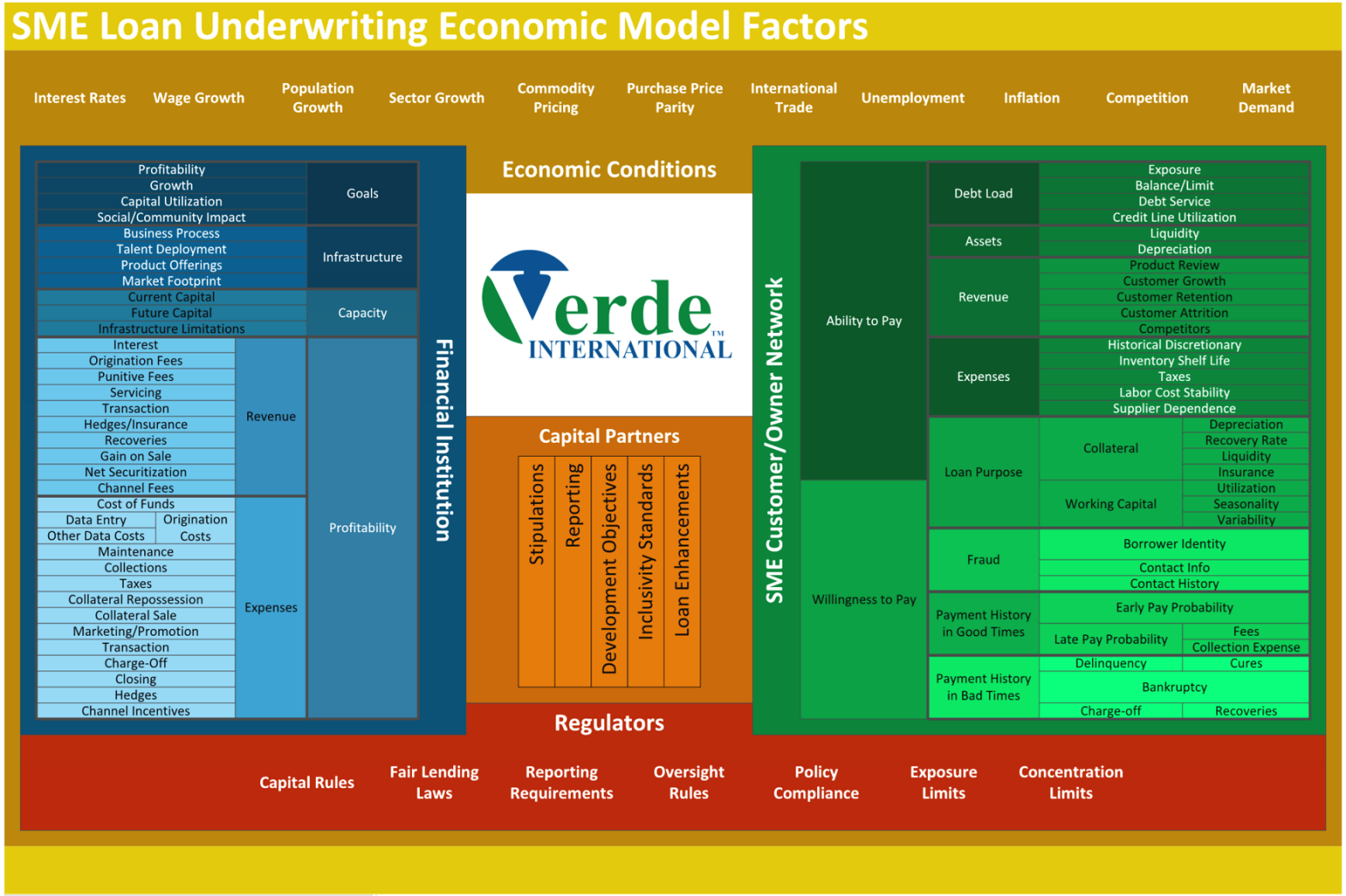
ECONOMIC CONDITIONS
- Market Demand & Competition
- Local Market Conditions
- National & Global Conditions

REGULATORY EXPECTATIONS
- Safety & Soundness
- Fairness & Inclusivity
- Competitive Practice
- Economic Development

CAPITAL PARTNER INTERESTS
- Financial Performance & ROI
- Soundness & Reporting
- Development & Inclusivity

LENDER GOALS, COST & OPERATIONS
- Financial Performance
- Capital Optimization
- Operational Efficiency & Scalability

BORROWER GOALS, ABILITY & BEHAVIOR
- Goals & Economic Opportunities
- Financial Performance & Plasticity
- Financial Behavior & Resourcefulness



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Verde Allele™ for Portfolio Management

ALLL, CCAR, DFAST, CECL Detail

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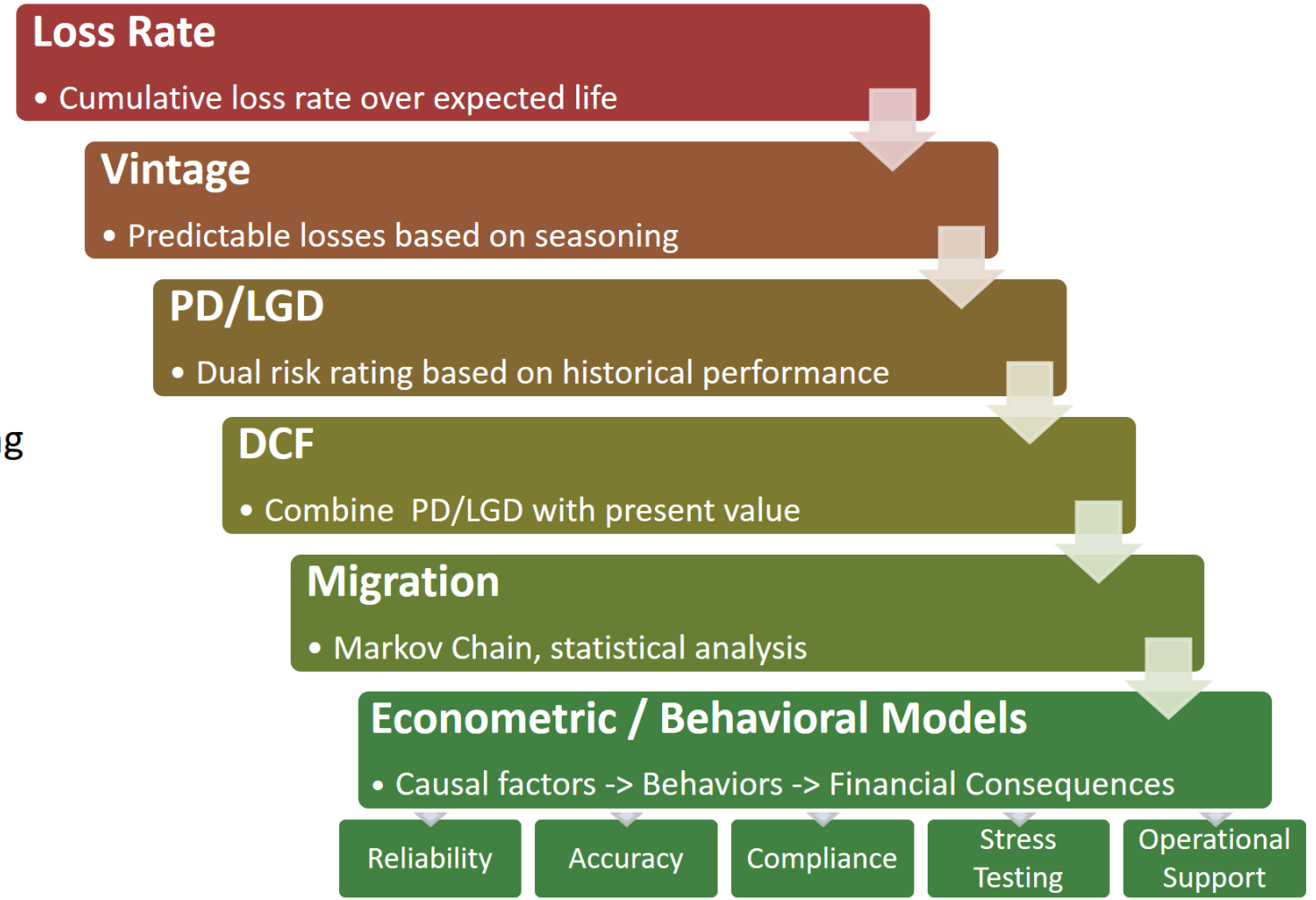
VERDE ALLELE™
CECL / ALLL / CCAR Model Sophistication

Why Econometric and Behavioral Models:

- Best attributes of PD/LGD, DCF & Migration
- Relate causal factors with financial incomes
- Highly accurate predictors of risk
- Highly accurate predictors of behaviors driving the balance sheet & bottom line
- Direct support of stress testing

Why Account Level Models:

- Increase accuracy
- Insight for strategic planning
- Best support for operational demands
- Best support for relationship management



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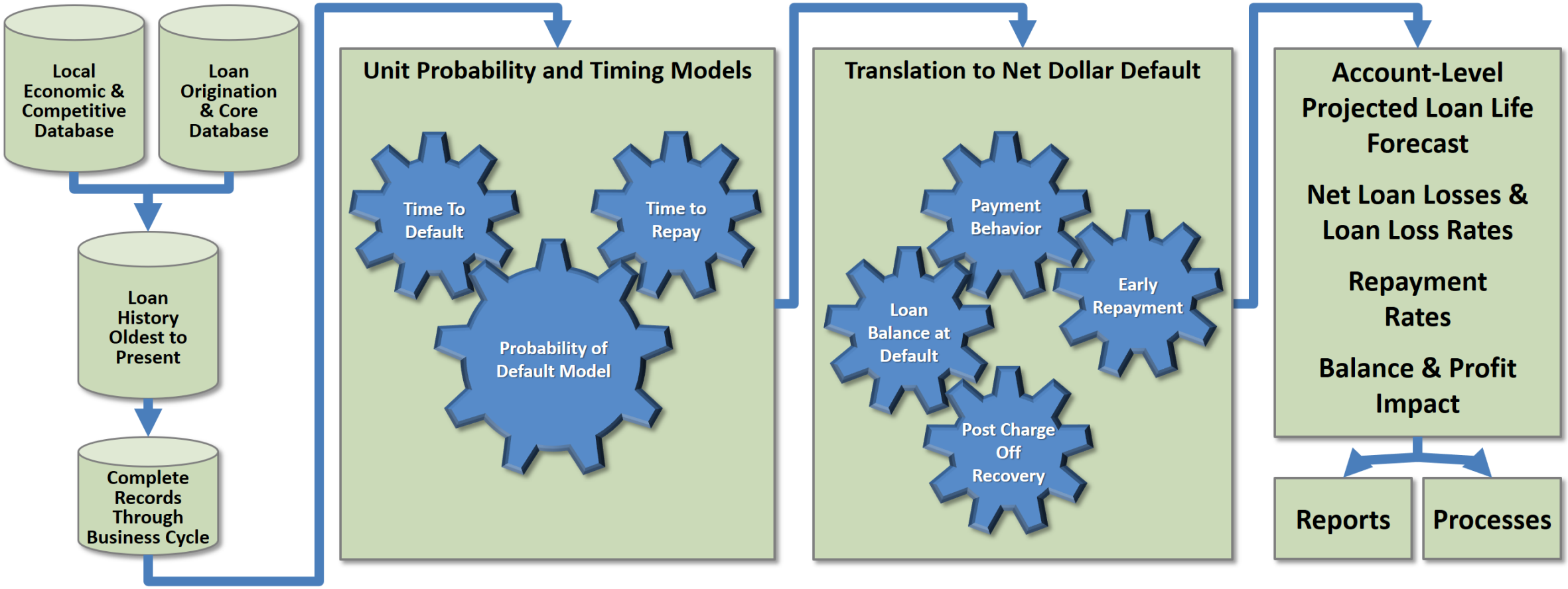
VERDE ALLELE™
Process Flow Chart



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VERDE AURORA™ & VERDE CORONA™

A Consortium Approach to Empower Lenders of Any Size & Experience Level

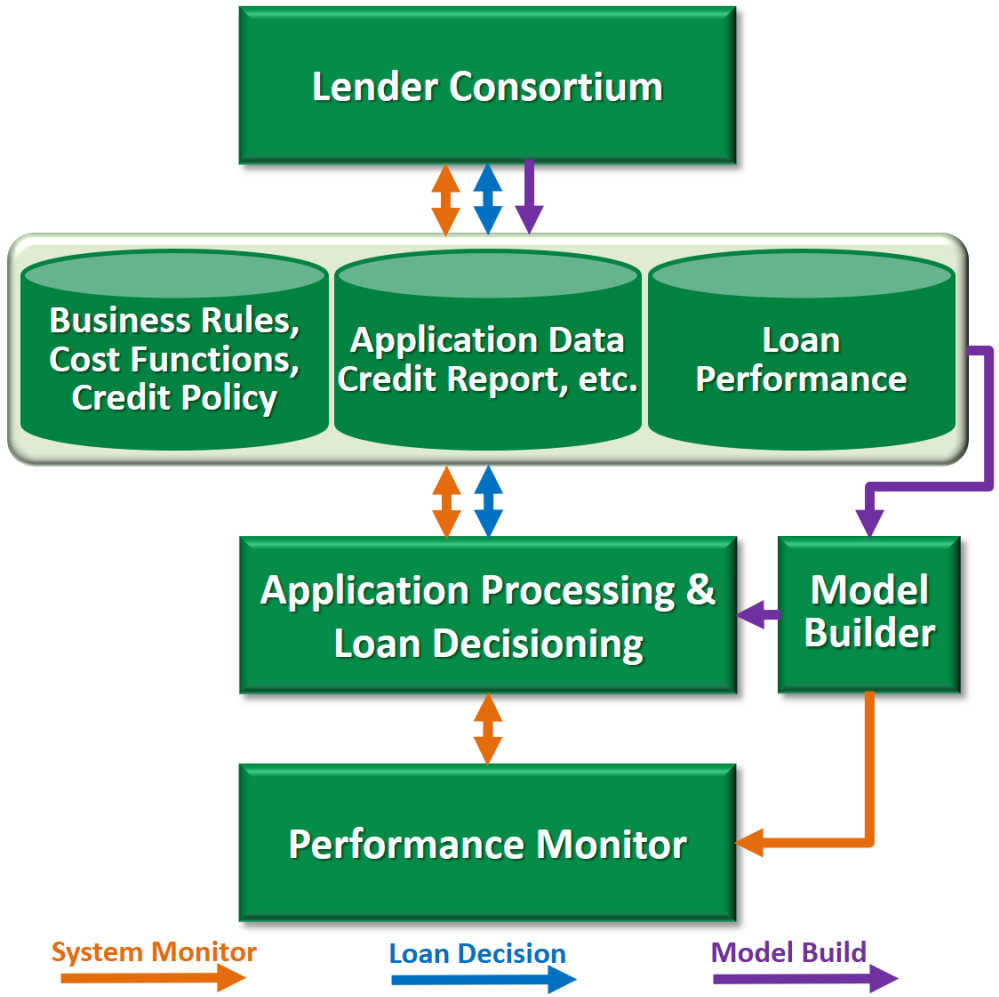
Problem: Many small or fragmented lenders lack advanced underwriting tools for scalable underwriting, preventing reliably lend beyond existing products and markets.

Consequence: Capital flow is constrained and poorly deployed with unacceptable compliance and performance risk.

Solution: A self-governing consortium of lenders contribute application and credit performance data to build proprietary advanced underwriting models. This makes best-in-class underwriting available and affordable for all members.

Models are tuned to each lender along with their particular business rules, cost assumptions and credit policies within an AI underwriting system providing PD, LGD, Cash Flow Projection, Loan Decisions & Optimized Pricing.

Supports & exceeds Basel III Advanced Approach standards, is suitable for stress testing & integrates with Verde Allele™.



The self-governing body of lenders defines participation rights, contribution requirements and usage rights.

Each lender contributes retrospective lending information and ongoing loan requests and payment performance.

Data is used to build custom underwriting models that reflect the collective experience and are attenuated to the individual lender.

Direct and indirect loan requests are processed automatically including offers and optimized counter offers in about 1 second.

The system continually monitors and reports model and system performance.

FI Associations, Multi-Market Lenders, Capital Partners, Aid & Development Organizations

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VERDE CORE™
A Complete Banking & Financial Service Platform - System Structure

Purpose: Complete front and back office functionality for banks, CUs, fintechs and finance companies. Easy to use, simple to deploy, secure, transparent, data-rich.

Design: Multilayered web application utilizing ASP.NET & C# for considerable flexibility & adaptability.

Deployment: Web-based SaaS solution or installed behind a client's firewall.

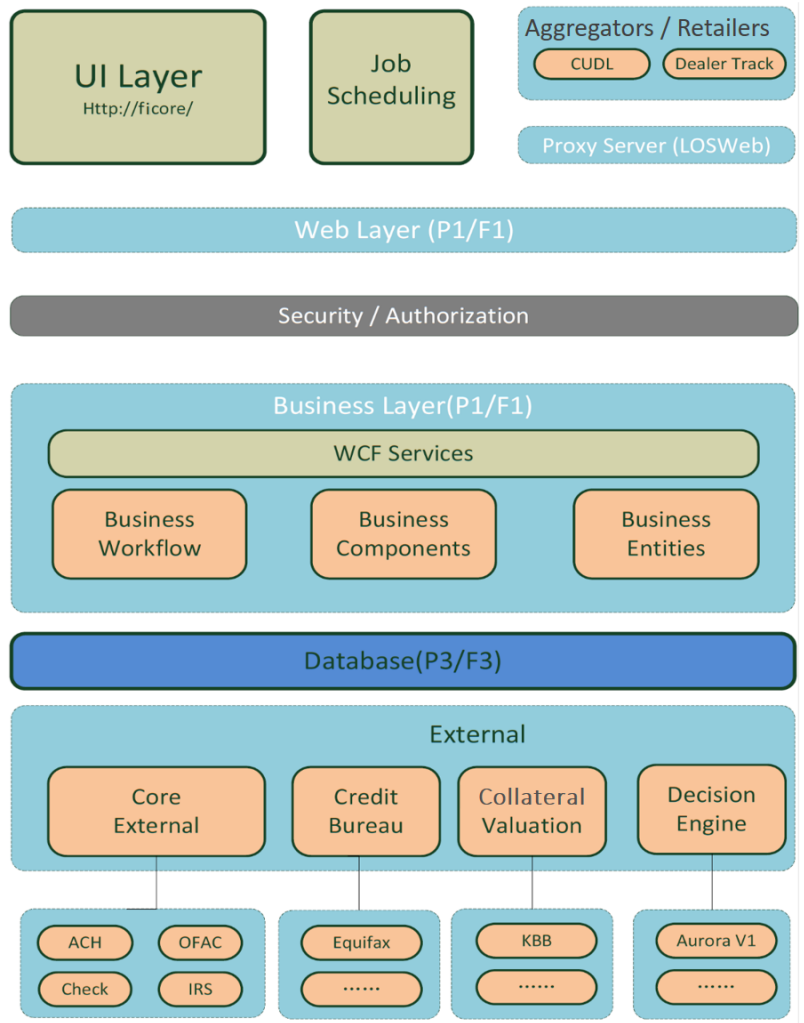
Database: Microsoft SQL Server DB database provides affordability, reliability, high performance & high security.

Security: Full encryption between layers. DB encryption options. Highly configurable Security and Authorization layer has strong, flexible controls.

Scalability: Load balancing across multiple servers.

Failover: Mirroring, replication & multi-server rollover.

Adaptability: Easy to add products & functions.



The UI and scheduling application sit outside the Web Layer, as do third-party applications that are connected via a proxy server.

Security is handled below the Web Layer and is fully customizable. Authorization can be assigned by user class and at the individual user level.

WCF is used to deploy all services below the Security and Authorization Layer.

The database is built within SQL Server and replicated in a reporting environment. This provides clients a simple, low cost path to reporting and analysis.

Connectivity to other Verde applications, as well as third-party applications and data sources, is virtually unlimited.

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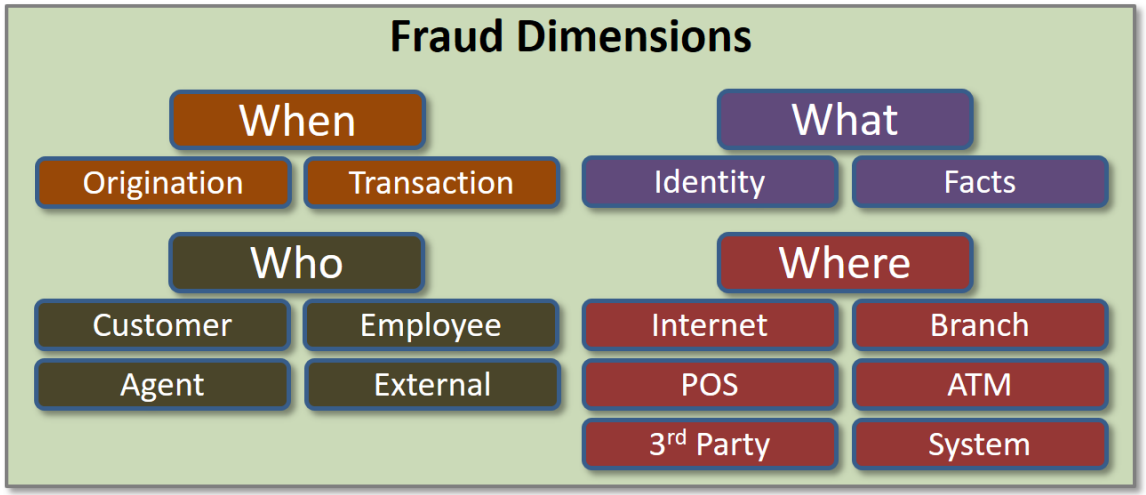
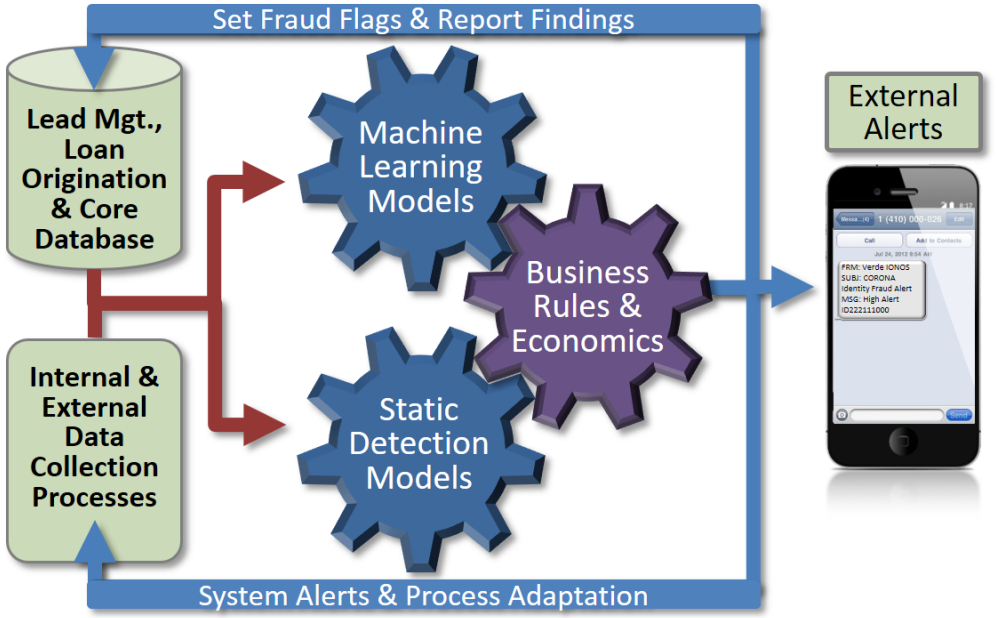
VERDE IONOS™
Systematic Fraud Protection



Combating Fraud: **Verde Ionos™** works by continuously monitoring and analyzing activity to detect and alert your team to potential threats.

Deployment: **Verde Ionos™** fraud detection systems search for potentially aberrant and threatening activity. When threatening patterns are detected, **Verde Ionos™** generates content-rich alerts to help your staff understand the nature and significance of potential threat.



Models: **Verde Ionos™** combines static behavioral models with machine learning for peak performance. **Verde Ionos™** measures identity discrepancy, data inconsistency, data fabrication, and first/early payment default risk.

Business Rules & Economics: Model output measures probability and severity, drive business rules and calculates the economic consequence of false positives and false negatives for a rational, informed approach to fraud management.

Reporting & Alerts: **Verde Ionos™** interfaces with banking system to drive alerts, processes and flag settings. It can also push external, real-time alerts.

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