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# Cash Forecasting 2.0: Emergence of Liquidity Planning

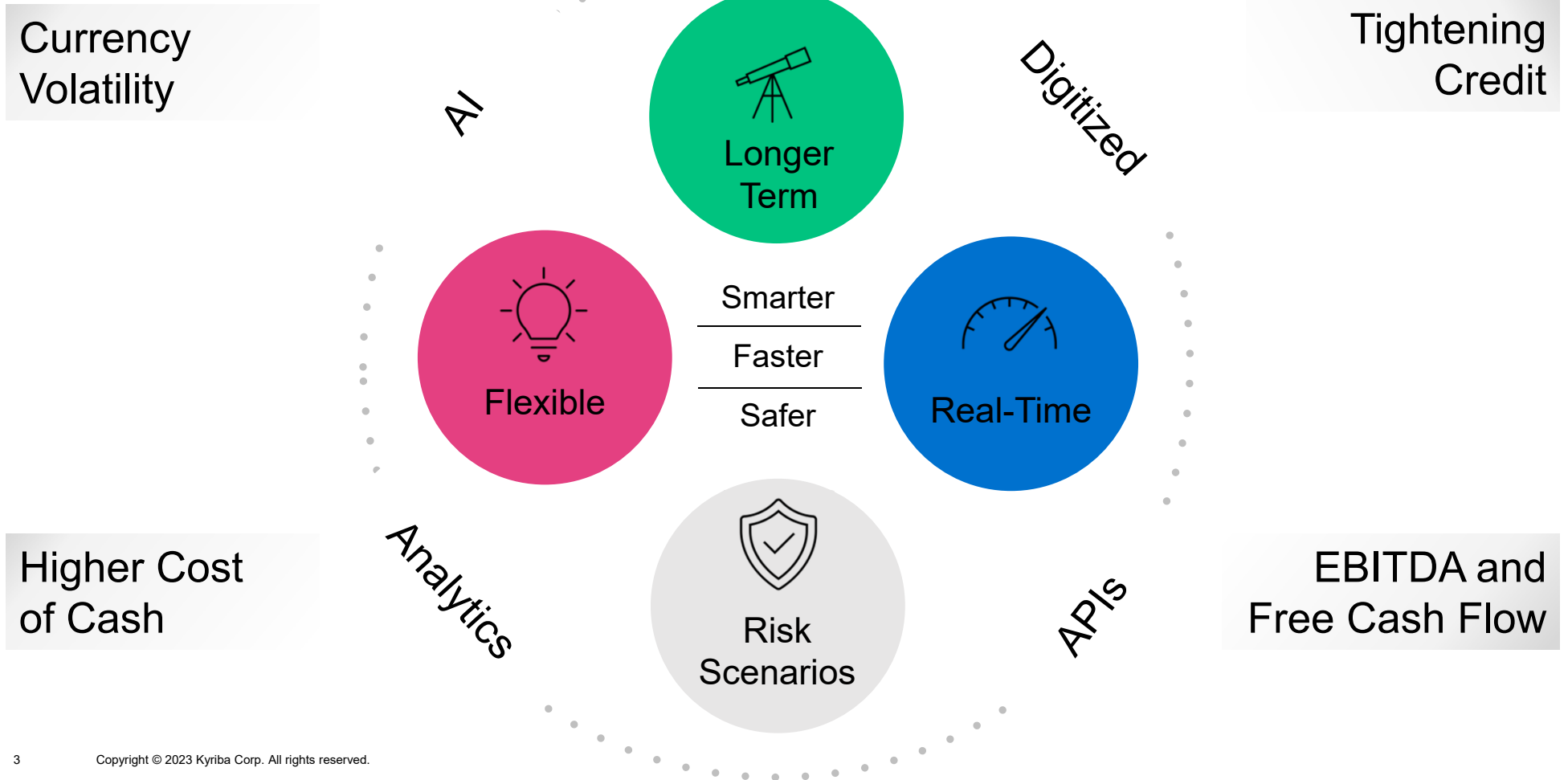


# Agenda

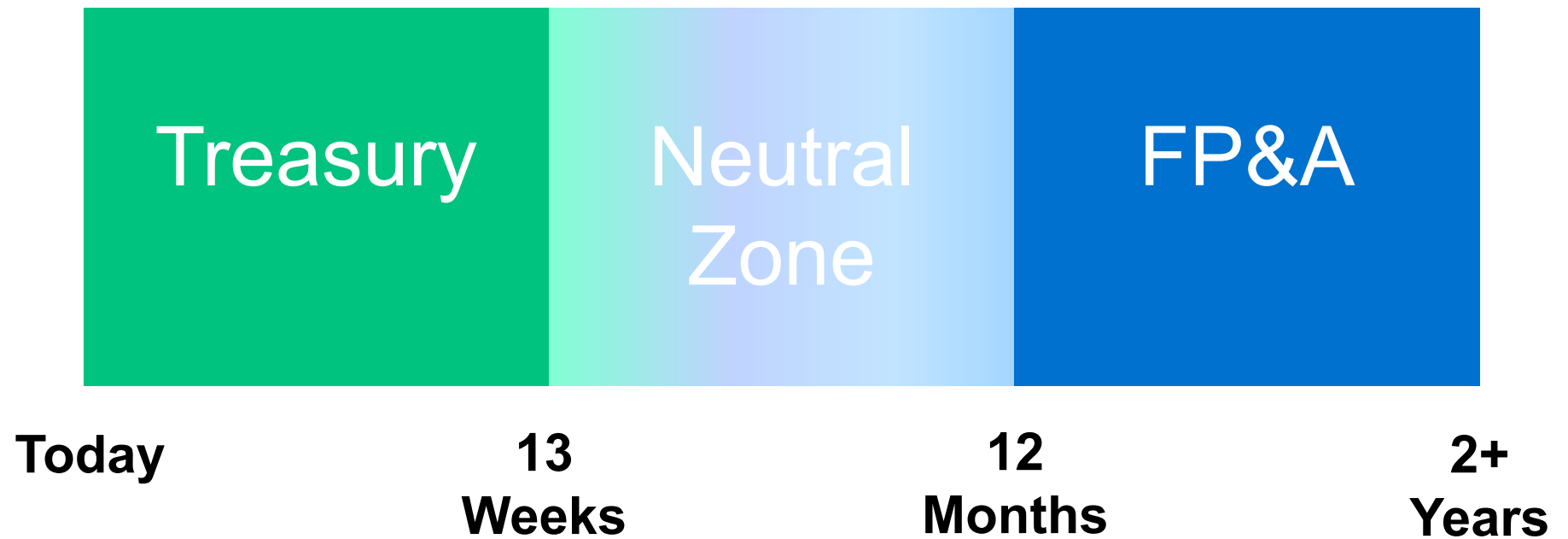
- 01 **HOW HAS FORECASTING CHANGED**
- 02 **CASH FORECASTING VS. LIQUIDITY PLANNING**
- 03 **LIQUIDITY PLANNING DATA STRATEGY**
- 04 **WHY EVOLVE: KEY BENEFITS**
- 05 **SUMMARY: RE-THINK FORECASTING?**



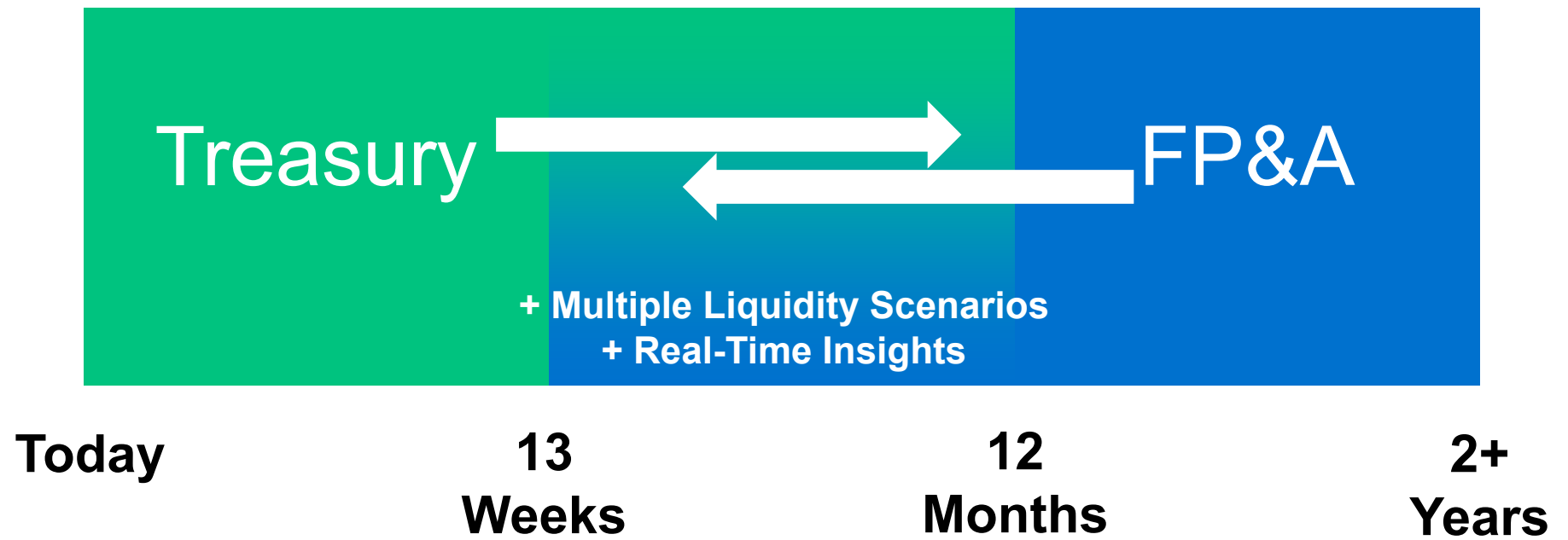
# Forecasting Has Changed



## In the Old Days...



Since 2020...



# 2023 Forecasting Drivers

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## DRIVING YOUR DATA STRATEGY

- Unifying Data with APIs
- Harnessing Data with AI
- Analytics for Data-Driven Decisions

## REAL-TIME PERFORMANCE

- On-Demand APIs
- Instant Payments
- Actionable Decisions



## ENTERPRISE LIQUIDITY

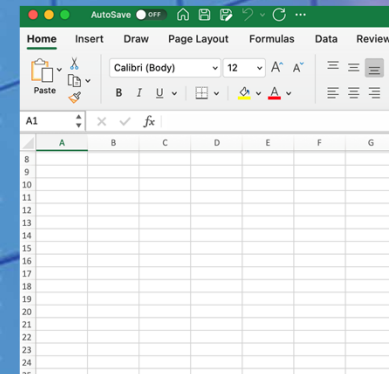
- Making Your Forecast Actionable
- Surrounding with Data to Optimize Investing, Borrowing, Hedging, Working Capital Decisions

## MINIMIZING RISK

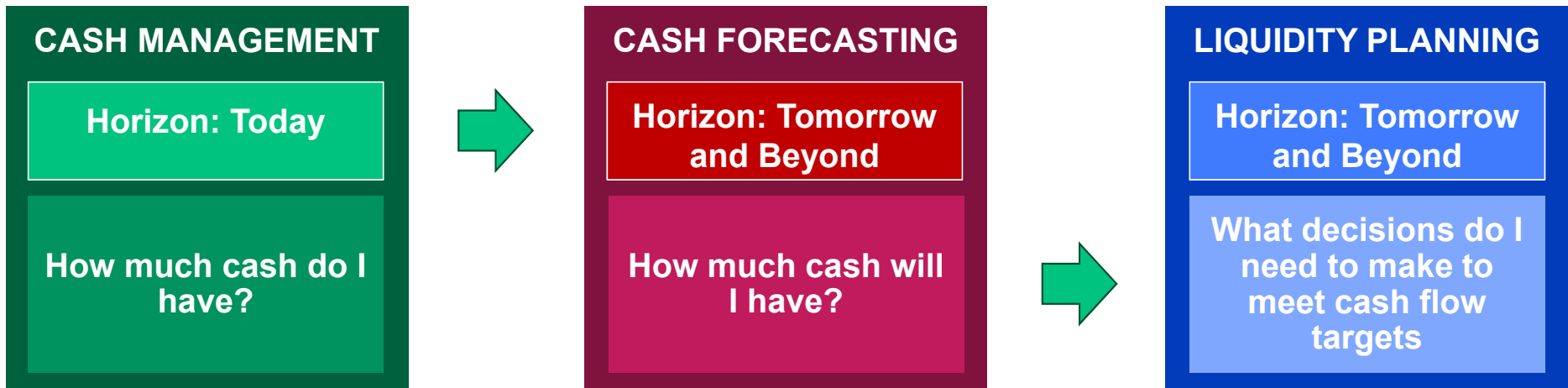
- Reducing Vulnerability to Rising Rates and Currency Volatility
- Improving Controls and Fraud Prevention

# Top 5 “System” Challenges

- 1 Data Silos - Treasury, AP/AR, FP&A
- 2 Multiple Scenarios - how do you track and stress-test more than one forecast?
- 3 Easier to Use Excel - typing & copy/paste
- 4 Modeling the Forecast - Layouts, Rollups and Hierarchies
- 5 Presentation - Visualization, Reporting and Analytics



# Evolving Beyond Visibility



## 1. Surrounding Forecast with Data

- Current Debt and Borrowing Availability
- Money Market Investments
- Exposures and Hedging Projections
- Cash Conversion Cycle - DPO, DSO

## 2. Required Capabilities

- Direct & Indirect Cash Flow Modeling
- Multiple, parallel forecasts
- What-If scenarios
- Real-Time/On-Demand Reporting



# To Support Your Forecasting Data Strategy

**APIs** connect Banks, ERP, Apps and  
any System with your Kyriba Data

**AI** drives predictions, data  
enrichment and usability

**Analytics** turns data into insight and  
intelligence



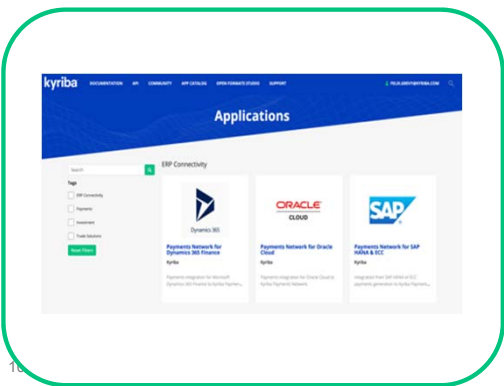
# APIs: Connecting Data and Process

On Demand and in Real-Time

## Enterprise Systems



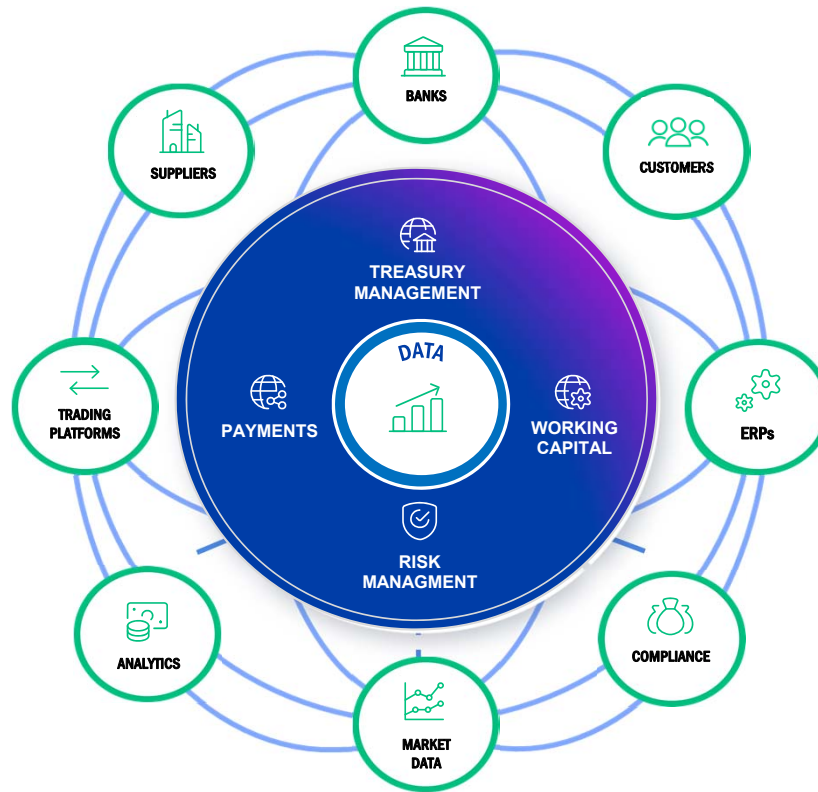
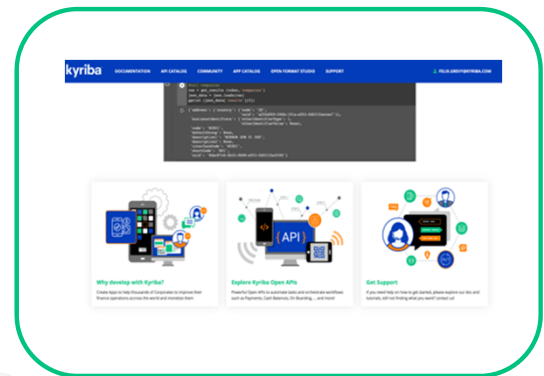
## External Apps and Data



## Bank Connectivity



## Internal Systems





# PREDICT

Enhance amount and/or timing of existing forecast cash flows

# GENERATE

Create new forecast data sets (e.g. company acquisition)

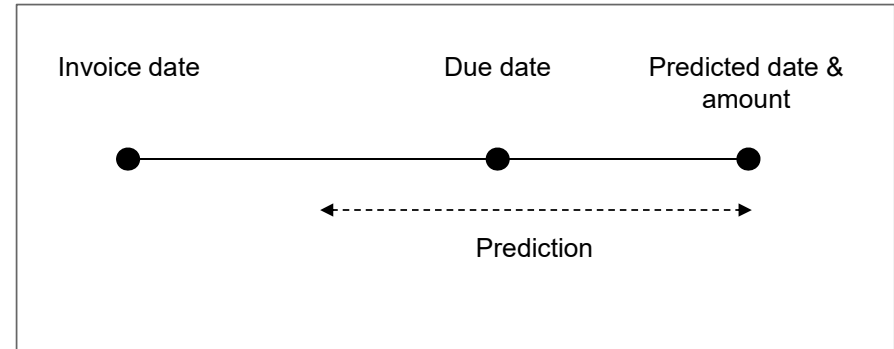


# AUTOMATE

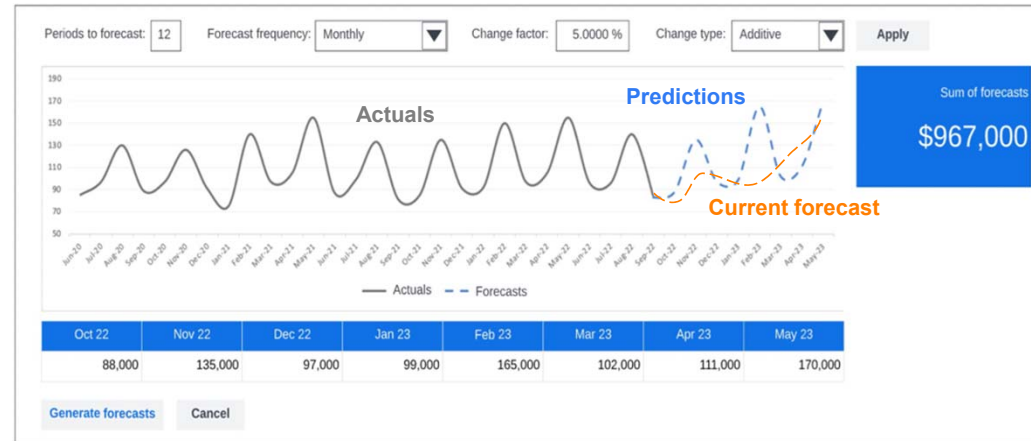
Presentation of data and insights. AI will replace your mouse.

# AI: New Opportunities

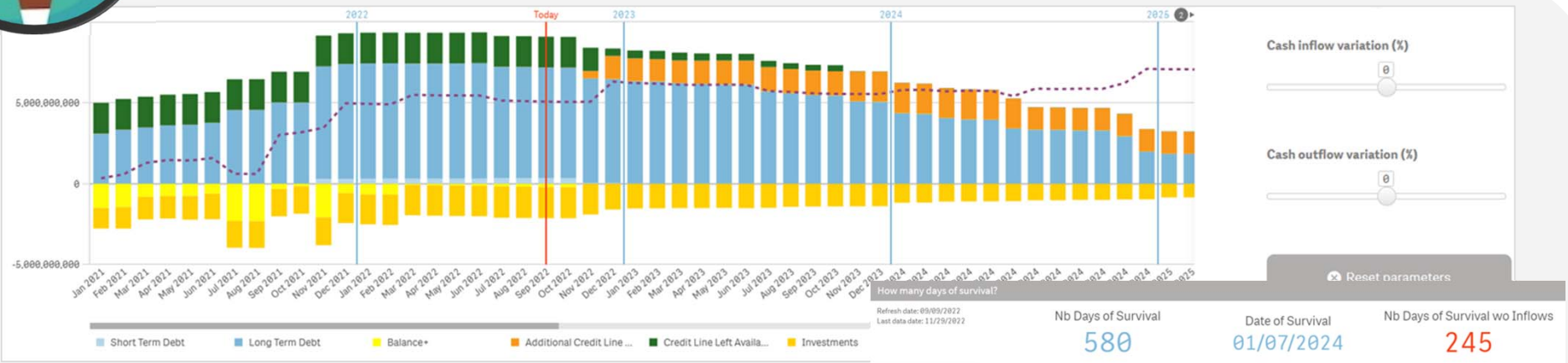
## Predict



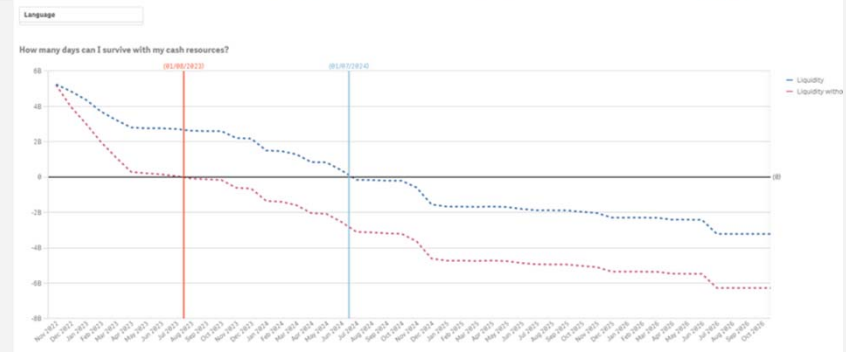
## Generate



“Analytics allow me to surround the forecast with data to assess potential impacts to liquidity”

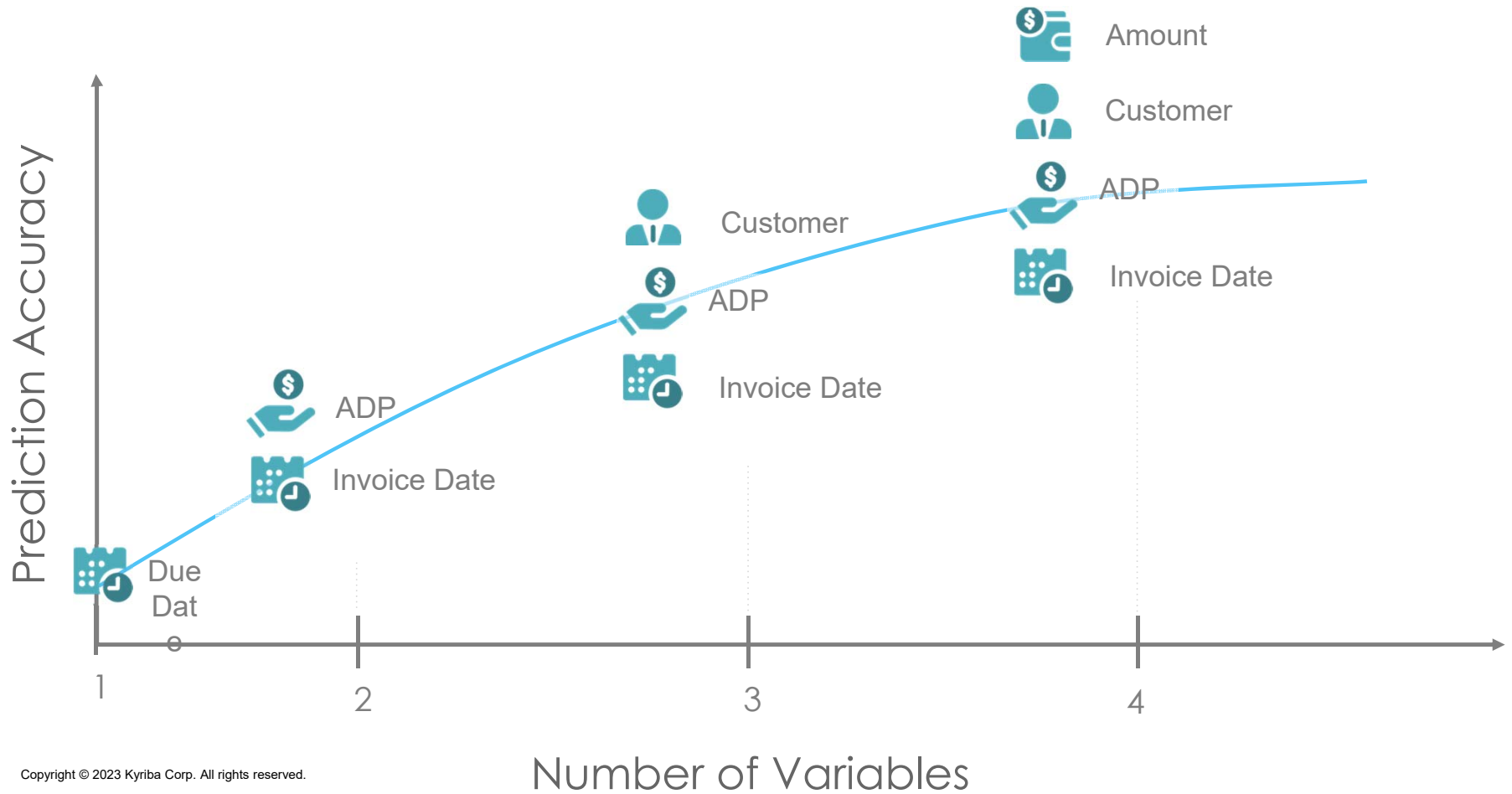


- Available Credit Lines
- Used Credit Lines
- Long Term Debt
- Short Term Debt
- Cash Balances
- Liquid Investments

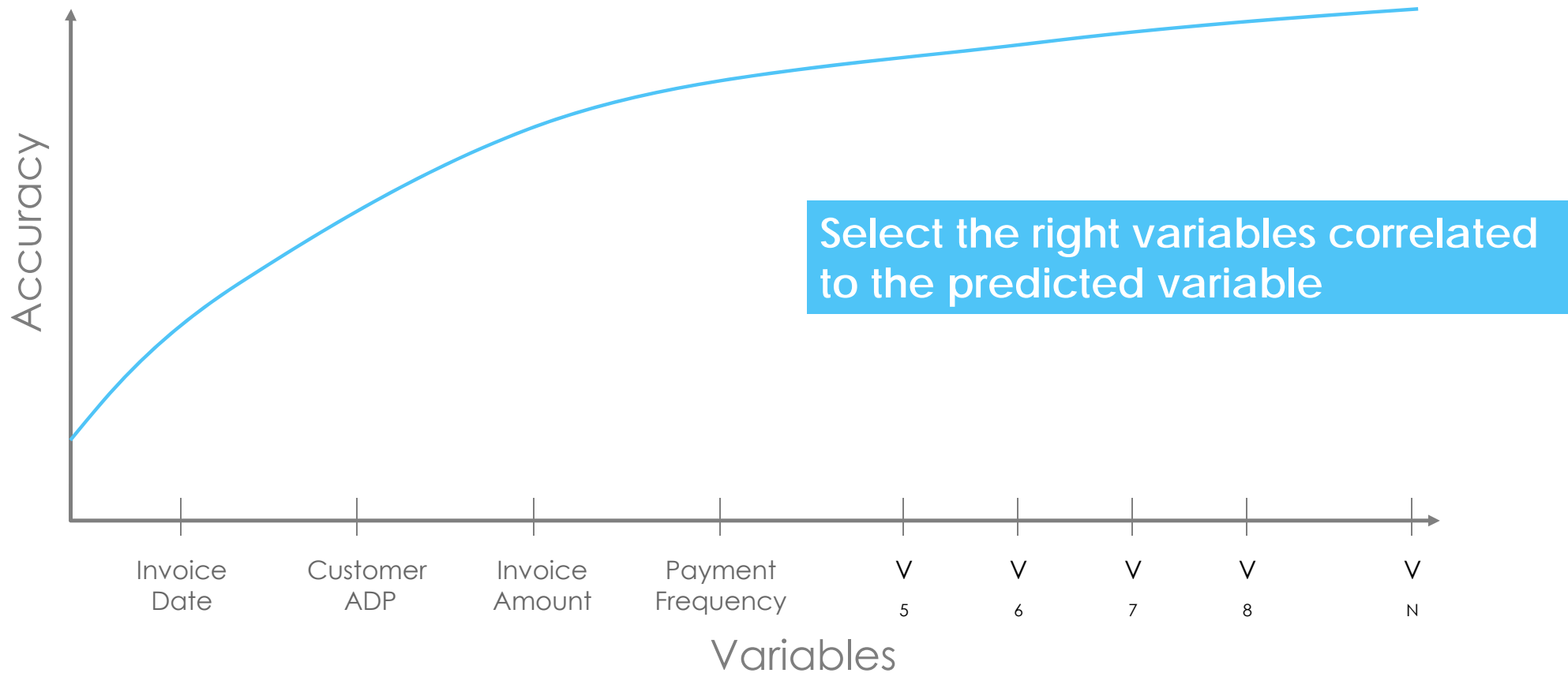


# AI In Forecasting

# Accuracy Levels on Forecasting



# AI – Data and Variable Sizes



# Variables in Modeling

## Invoice Characteristics

- Payment Term
- Amount
- Discount Percentage
- Transaction Type

## Customer Payment Pattern

- Day of Week
- Day of Month
- Week of Month
- Holiday Shifting Behavior

## Customer Consistency

- Past Due Amount
- Dispute Rate
- Credit Utilization

## Processing Observations

- Payment application delay
- Invoice Cancellations
- Credit Memo Creation Rate



# Apply the Best Algo for the Situation

## Master List

Invoice Date  
Customer Specific ADP  
Invoice Amount  
Past Invoice Count  
Total Open Amount  
Gap between payments  
Delayed payments percentage  
Branch Level Delays  
Closed invoice sum  
Delayed invoice sum  
Due Payment Day Of the Week

**60+**

Invoice and Customer  
Level Variables

## Correlated Variables

Invoice Date  
Customer Specific ADP  
Invoice Amount  
Past Invoice Count  
Total Open Amount  
Gap between payments  
Delayed payments percentage  
Branch Level Delays

**30+**

Correlated  
Variables

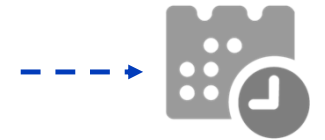
## Pick the Algorithm

Linear Regression  
Logistic Regression  
**Random Forest Classifier**  
Neural Networks  
Decision Trees  
Support Vector Machine  
Gradient Boosted Trees

**25+**

Artificial Intelligence  
Algorithms

Temporal Difference



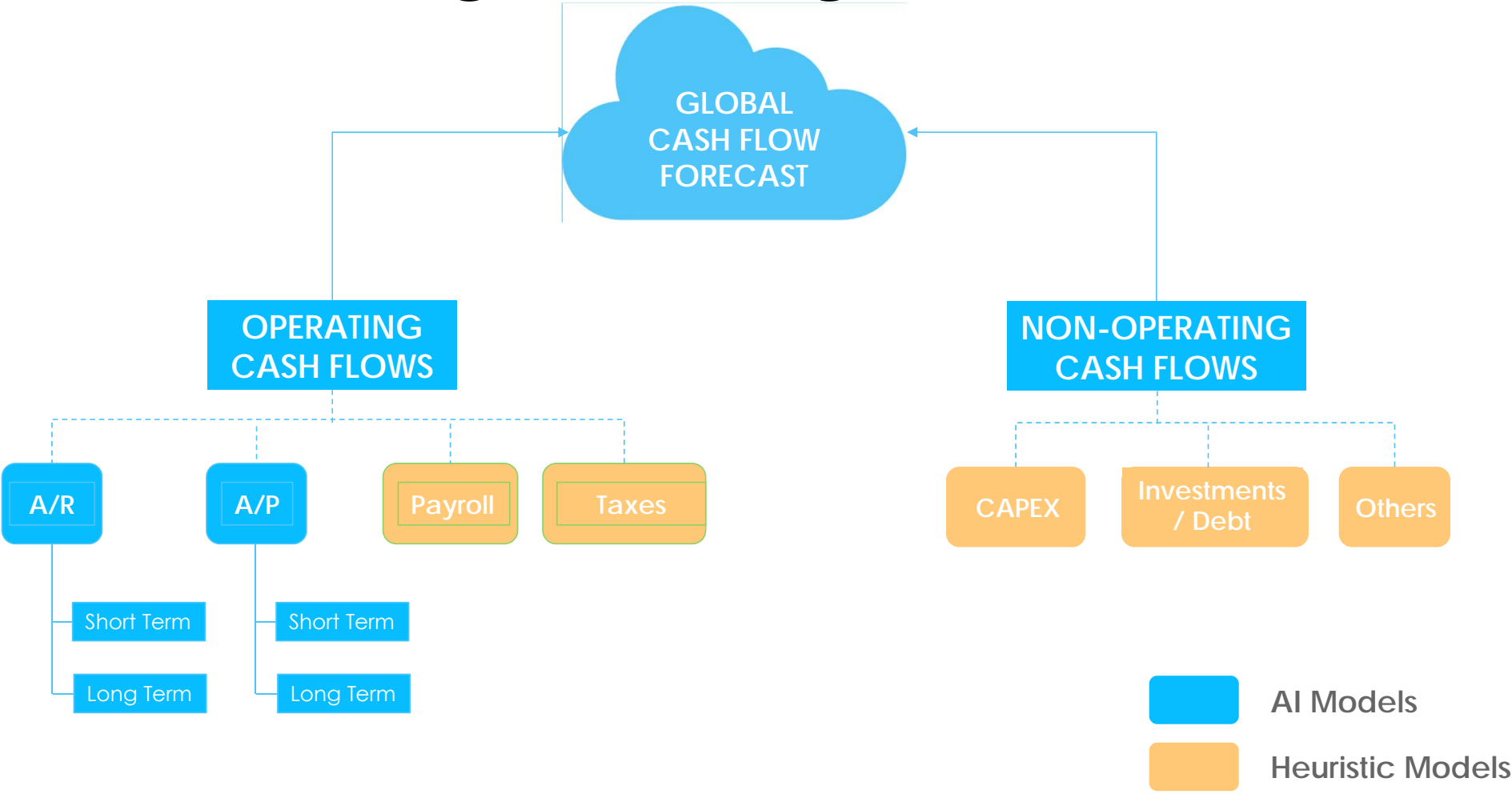
Predicted  
Payment  
Date

# Forecasting Horizons

Forecast Horizon	Key sub-Forecasts	Modelling Technique
0 - 14 days	<ul style="list-style-type: none"><li>Open Invoice - Sub-Customer Level</li></ul>	Supervised Ensemble ML Models
15 - 28 days	<ul style="list-style-type: none"><li>Open Invoice - Sub-Customer Level</li><li>In-Period Invoice Creation and Clearance</li></ul>	Ensemble modelling with Short Term Model Parameters
29 - 180 days	<ul style="list-style-type: none"><li>Historical Seasonality + Holiday effects + Recent Trends</li></ul>	Additive Models for Nonlinear Trends with Seasonalities

Forecast horizon and Data ----- > Modelling technique/ algorithm

# Cash Forecasting for All Categories

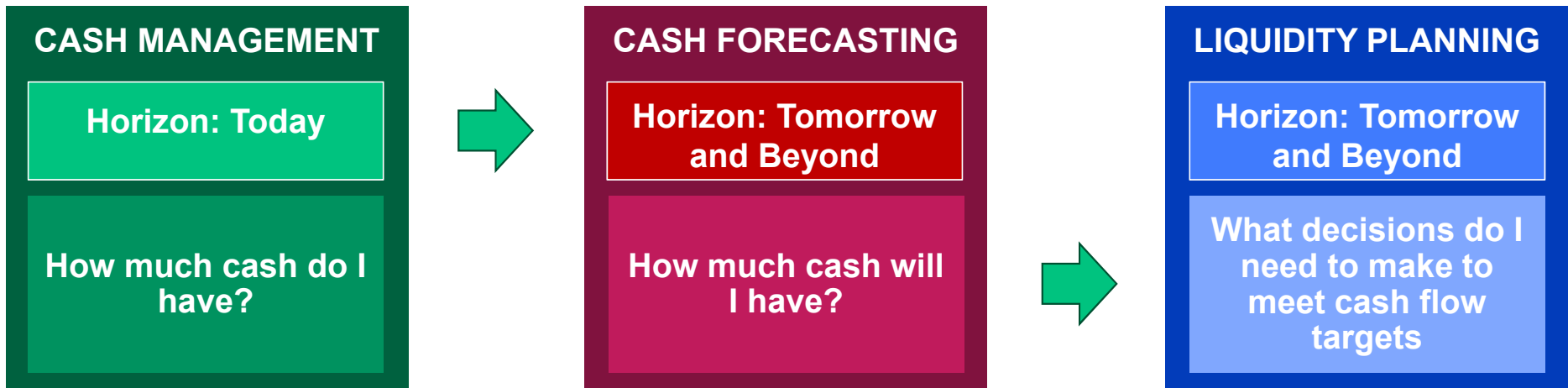


# In Summary

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# Evolution to Liquidity Planning

- 1) Make your forecast actionable by surrounding with data: APIs, AI, Analytics
- 2) Quantify the impact of external exposures: FX, Commodities, Interest Rate...even Fraud
- 3) Unlock the Cash Conversion Cycle: Proactively Manage DPO and DSO to (more cost effectively) meet cash flow targets



**Beyond  
Visibility**

**Measure  
Impact  
“What if”**



**Unlock  
Internal  
Cash**



# Key Outcomes

<b>Visibility</b>	100% of enterprise cash, liquidity, financial exposures
<b>“Create Cash”</b>	Reduce idle cash, improved cash pooling/IHB, optimize cash conversion cycle
<b>Resilience</b>	Predict impact of market volatility and internal/external scenarios on cash flow and financing decisions
<b>Efficiency</b>	More effective investing / efficient borrowing
<b>Productivity</b>	Technology does not eliminate jobs but gives people better ones!

# Questions?



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# Thank You!

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