Forecast Validation Palm / Kyriba

Variance Analysis Methodology - Treasury R&A

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Why invest in ML when Kyriba already has forecasting?

Kyriba's forecasting relies on deterministic rules (e.g., invoice due dates) that only shows what is already booked, failing to account for what isn't in the system yet and transactions that might not be booked until the last minute. ML-based forecasting does not just aggregate data; it applies inferential statistics to learn cash flow rhythms and clean signal noise, turning a rigid ledger into a dynamic, adaptive prediction.

Accurately categorized actuals are key for forecasting in both models.
Kyriba excels at centralization, but it ingests actuals (bank statements and invoices) exactly as they are in D365. This is why their forecast shows linear trends considering only this raw data, creating "blind spots" in accuracy.
In Palm, we use AI to actively re-categorize these transactions, to improve data visualization and insights generation.

Palm's Machine Learning acts as a quality control layer, using historical probability to filter out noise and dampen over-optimism.
That's why we needed to **validate the forecast model**, ensuring we make decisions based on behavioral reality, not just contractual due dates.

Why invest in ML when Kyriba already has forecasting?

Technology	Palm	Kyriba
Forecasting	Applies inferential statistics to learn cash flow rhythms and provides dynamic & adaptive predictions based on historical behavior by using its Machine Learning based model.	Relies on deterministic rules like contractual invoice due dates. Trends become linear over time and create "blind spots" because it cannot account for unbooked or last-minute transactions.
Categorisation	Uses AI to actively re-categorize transactions by reading descriptions of the ingested data. This automation drives better data visualization and insights generation.	Requires extensive, time-consuming manual rule mapping by the team to categorize transactions.
Data Source	Doesn't own the raw AP/AR data, but leverages historical data patterns and fluctuations to feed its predictive models.	Ingests bank statements and invoices exactly as they are in D365. Strictly limited to what is already booked by the AP/AR team.


02/Process & Metrics.

From Implementation to Validation: the methodology and the KPIs

Objective: Establish a rigorous, data-driven framework to evaluate our parallel forecast models and validate the new cash planning ecosystem between Kyriba & Palm.

Primary KPI

WMAPE (Weighted Mean Absolute Percentage Error) to quantify true variance.

1. Snapshot Accuracy (WMAPE)

We use WMAPE to measure the average error across **all the weeks within a single snapshot** (a 13-week Forecast of the Global Operating Cash Balance).

WoW improvements and trace progress back to re-categorization efforts or adjustments to the models.

2. Horizon Accuracy (Weeks Ahead)

We used the *WMAPE* here to measure the *average* error **across all snapshots** when we look X **weeks ahead.**

The goal is to see if how the tools' performance changes for different time horizons

WMAPE and why?

Raw variance lacks normalization.
A $5M deviation is mathematically identical whether the baseline is $10M or $500M, providing no normalized benchmark for performance.

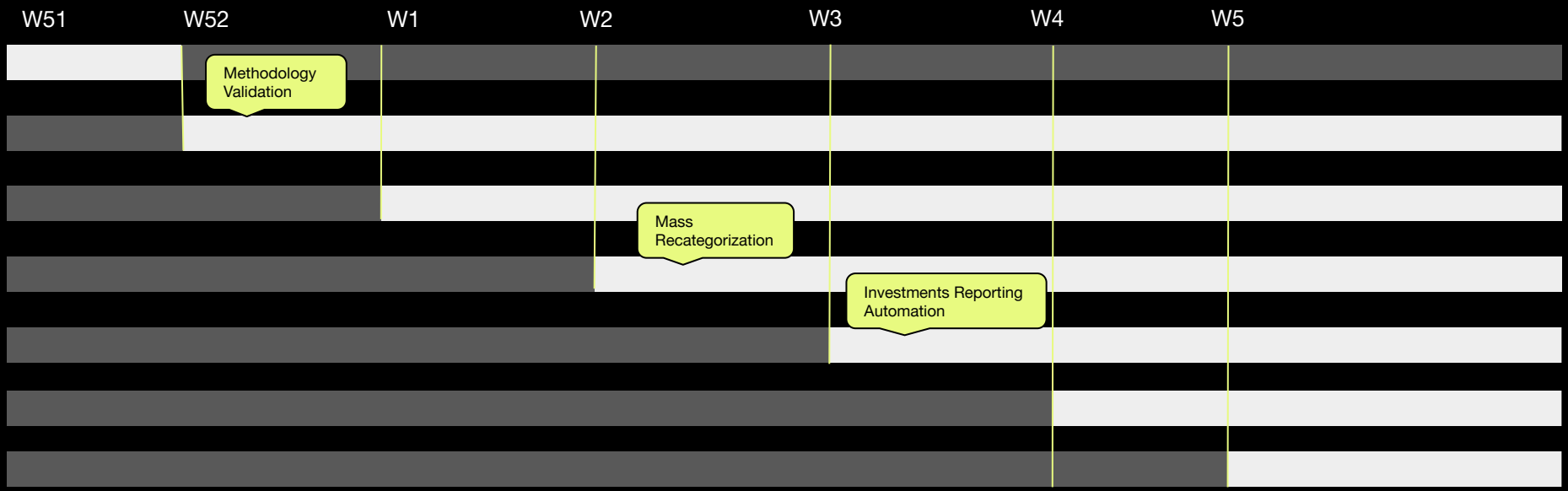
WMAPE weights the error by the *volume* of cash compared to the global level and it consider the variance as it was a g*rowth rate.*

This ensures in further entity level analysis that a 10% error on a massive account (like *On Inc.*) impacts the score more than a 50% error on a dormant entity.

Metric: A lower percentage indicates higher model accuracy.

$$\text{WMAPE} = \text{w} \cdot \left(\frac{\text{Actual - Forecast}}{\text{Actual}} \right)$$

Analysis Structure: Ladder Scheme



13w Forecast Snapshots

Action & Granularity

Compare the consolidated Global Cash Position forecast in Palm vs. Kyriba. Actual vs Forecast ***weekly*** check (every tuesday). From W51 2025 to W5 2026.

Validation Cycle

Forecasts are captured at week **t** (baseline) and measured against realized actuals at **t+1.** Each forecast produce a 13 week version which let us compare the different snapshot and weeks ahead.

Time Horizon

A highly focused 7w evaluation window (extracting the data from each 13w Forecast). The plan is to keep the methodology going forward to ensure higher forecast accuracy.

03/Insights & Results.

Getting ***insights*** from the methodology and validating assumptions

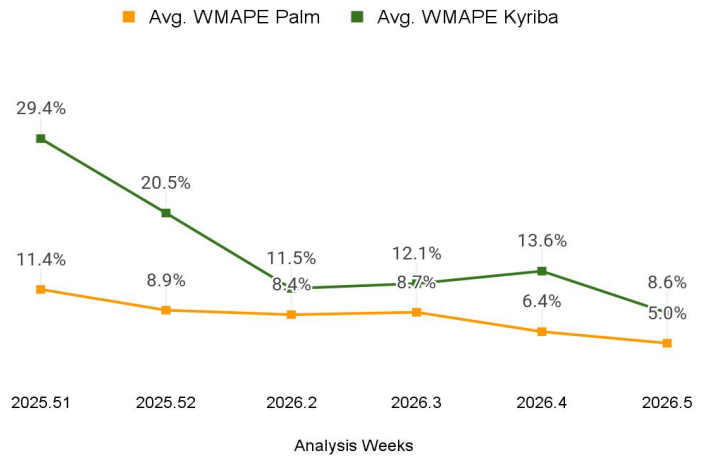
WMAPE COMPARISON BY FORECAST SNAPSHOT

Palm showed consistent week-over-week improvement scoring lower percentages than Kyriba

WMAPE Heatmap - Global Operating Cash Balances

Analysis Week	Avg. WMAPE Palm	Avg. WMAPE Kyriba	Difference
2025.51	11.4%	29.4%	-18%
2025.52	8.9%	20.5%	-12%
2026.2	8.4%	11.5%	-3%
2026.3	8.7%	12.1%	-3%
2026.4	6.4%	13.6%	-7%
2026.5	5.0%	8.6%	-4%

Average WMAPE by each sampled weeks



Initial Weeks Performance

W51 - W52

Over the first 2 weeks **Kyriba** showed higher volatility reaching **20.5% of WMAPE**, while **Palm** successfully contained the noise, holding variance at **8.9%**.

Later Weeks Consistent Trend Improvement

W3-W4-W5

Both tools are performing more consistently after data fixes:
Palm: Re-grouped categories in Week 3 to fix accuracy issues improved WMAPE by 2%.
Kyriba: cleaned up AR categories that were overestimating balances reduced the WMAPE by 10% in week 2026.2.

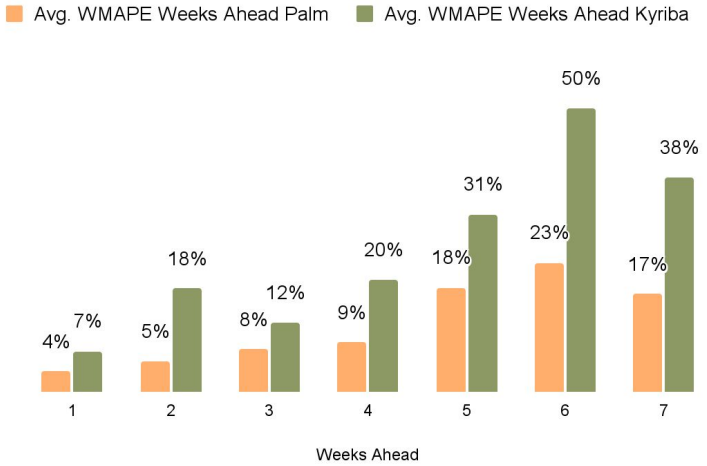
**Note: the most recent weeks (2026.4 and 2026.5) have fewer data points compared to the earlier weeks. Treasury will continue to update the analysis until each week contains the same number of data points (13 weeks).*

FC TRENDS IN TERMS OF WEEKS AHEAD OVER THE 7w TIME-SPAN

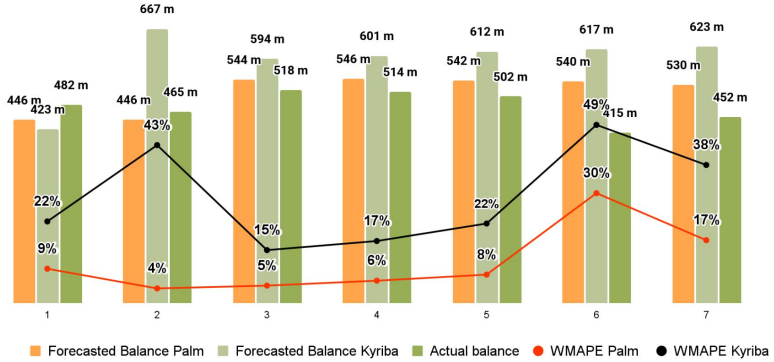
Palm outperformed in the short term, while both models experienced challenges in the mid term.

WMAPE by Weeks Ahead on Global Operating Cash

Weeks Ahead	Avg. WMAPE Weeks Ahead Palm	Avg. WMAPE Weeks Ahead Kyriba	Difference
1	4%	7%	-4%
2	5%	18%	-13%
3	8%	12%	-5%
4	9%	20%	-11%
5	18%	31%	-13%
6	23%	50%	-27%
7	17%	38%	-21%



Snapshot of FC Balances and WMAPE Evolution of the Initial Week (51.2025)



On the shorter term (2w) Palm establishes a highly reliable baseline at just **4.5%,** whereas Kyriba record a **12.5%** error rate.

Volatility Control

While Kyriba's error compounds rapidly (spiking to **18%** by Week 2), Palm remains stable across the timeline with WMAPE's staying strictly in the single digits until W4.

Strategic Recap

Criteria	Kyriba Behavior	Palm Behavior
Forecast	*Starting Balance + AR-AP Data* Adds trends linearly and “misses” data over time because of the standard payment terms (30 - 60 days) so AP/AR are highly concentrated in a shorter horizon. As an instance there’s high volatility due to AR *concentration of invoices* and *manual logic in Kyriba.*	*Time Series Analysis* Captures cash flow rhythms (very relevant for cash ins). *Low volatility.* Palm’s horizon is theoretically infinite since it doesn’t require booked data to evolve.
Maintenance	Highly dependent on invoices, postings booked into D365 and manual updates (batching rules to structure the data).	Successfully absorbed the mass re-categorization quickly driving a sequential reduction in global variance down to 5%.
Trend	Linear FC based on manual inputs and rules.	Reverts to mean (Safer forecast).

WMAPE Heatmap - Global

WMAPE Heatmap

Global

			Palm	Kyriba				
Reference date	Analysis Week	Week	WMAPE Palm	WMAPE Kyriba	Difference	Forecasted Balance Palm	Forecasted Balance Kyriba	Actual balance
12/17/2025	2025.51	1	9%	22%	-13%	446 m	423 m	482 m
12/23/2025	2025.51	2	4%	43%	-39%	446 m	667 m	465 m
12/31/2025	2025.51	3	5%	15%	-10%	544 m	594 m	518 m
01/08/2026	2025.51	4	6%	17%	-11%	546 m	601 m	514 m
01/14/2026	2025.51	5	8%	22%	-14%	542 m	612 m	502 m
01/21/2026	2025.51	6	30%	49%	-19%	540 m	617 m	415 m
01/28/2026	2025.51	7	17%	38%	-21%	530 m	623 m	452 m
12/23/2025	2025.52	1	1%	6%	-5%	462 m	492 m	465 m
12/30/2025	2025.52	2	4%	1%	3%	499 m	522 m	518 m
01/08/2026	2025.52	3	2%	8%	-5%	501 m	553 m	514 m
01/14/2026	2025.52	4	2%	17%	-15%	513 m	588 m	502 m
01/21/2026	2025.52	5	29%	41%	-12%	535 m	584 m	415 m
01/28/2026	2025.52	6	16%	51%	-36%	523 m	683 m	452 m
01/08/2026	2026.2	1	4%	1%	4%	491 m	517 m	514 m
01/14/2026	2026.2	2	7%	9%	-2%	538 m	546 m	502 m
01/21/2026	2026.2	3	4%	11%	-7%	398 m	462 m	415 m
01/28/2026	2026.2	4	18%	25%	-7%	534 m	568 m	452 m
01/14/2026	2026.3	1	0.2%	14.6%	-14.5%	503 m	429 m	502 m
01/21/2026	2026.3	2	7%	20%	-13%	444 m	499 m	415 m
01/28/2026	2026.3	3	19%	16%	3%	538 m	523 m	452 m
01/21/2026	2026.4	1	7%	16%	-9%	386 m	480 m	415 m
01/28/2026	2026.4	2	6%	12%	-6%	479 m	504 m	452 m
01/28/2026	2026.5	1	5%	9%	-4%	475 m	413 m	452 m

Conclusions on the analysis

Kyriba

Forecasts are anchored to confirmed *invoice due dates*, *posting dates*, and **AP/AR** subledgers rather than behavioural models.
Provides a highly transparent, rule-based view of confirmed liabilities and receivables, acting as an exact mirror of our current accounting commitments.

Severe accuracy degradation in the critical 1-to-4 week window, *compounding up to a **20%** error rate.*

Fails to anticipate behavioral changes in payment patterns (e.g., late payments or early clearings), showing extreme friction when digesting structural changes.

Palm

Palm is definitively the superior model since it provides a *stable*, single-digit risk *environment on the short term .*

Although Palm lacks native ownership of *AP/AR* subledgers and depends heavily on *BigQuery* integrations and strict data categorization, its behavioral ML engine already system.

Palm in the 7w span ultimately outweighs these architectural dependencies, making it our definitive choice to drive the new cash planning ecosystem.

Learnings and reflections

On team internal: learnings and reflections

Categorization

- **Mapping:** even with prompting, **transaction categorization required significant manual effort**. At the beginning, we relied heavily on bank account–based mapping, which required frequent adjustments and ongoing fixes.
- **Global standards:** for some APAC entities, categorization was more complex due to language differences and symbol formats in Kyriba and Palm. This will require **additional regional support** to ensure consistent and accurate setup.

Visibility

- **Operating vs. Investment Cash View**: we faced challenges separating operating cash from investment flows in Palm. To ensure comparability, we had to manually exclude investment cash inflows from the reporting.
- **Later weeks:** we identified that forecasts in Palm were “frozen” for longer-term weeks (8–13). We stayed in close contact with the Palm team to resolve the issue and ensure forecast data remained updated and reliable.

KPIs

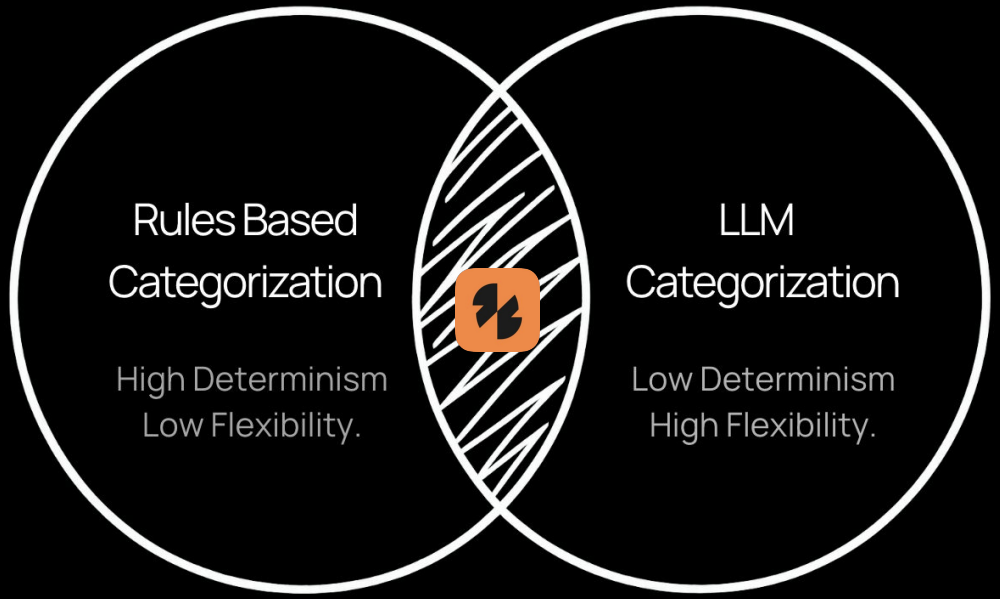
We could have been more consistent in defining, tracking, and monitoring KPIs throughout the project. We are refining our KPI framework and are still assessing which should be tracked at a detailed level:

- Minimum Cash Level
- 4-Week Rolling Average WMAPE
- Global Total WMAPE (with quarterly reduction target)
- Forecast Bias % (systematic over/under forecasting)
- WMAPE by Category, Entity
- Discussion: what is missing?

04/Palm Algorithm and Time Series Analysis.

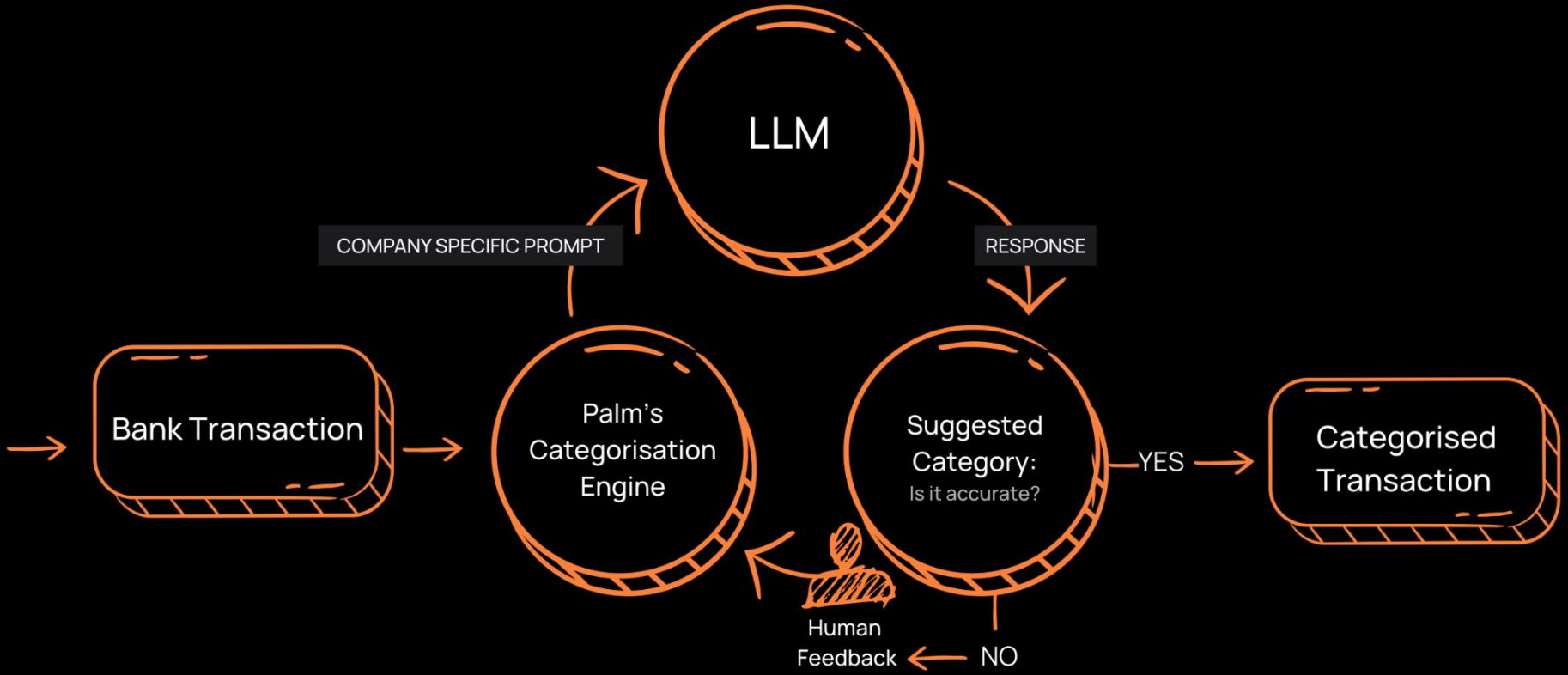
The foundation of every forecast

AI Categorization



The foundation of every forecast

AI Categorization

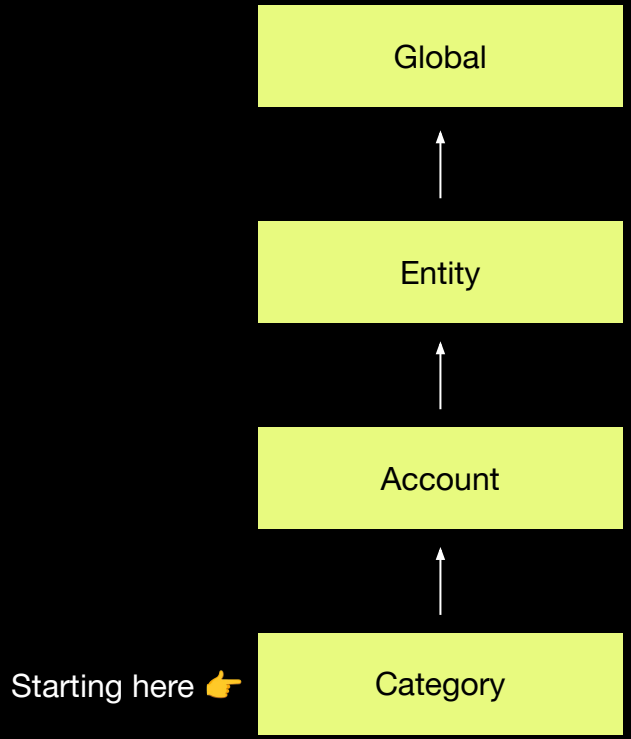


Every category runs its own model competition

Forecasting Models & Selection

Statistical Models	Pattern-matching models
Machine Learning models	Foundational models

1. Every model produces 13-week forecasts
2. Lowest error wins, that model gets assigned to the category
3. Registry updates every re-training cycle as patterns evolve



05/Next Steps.

Next Steps - Palm x On Roadmap for 2026

	Challenges	Actions
Q1 26	Categorization errors + limitations on forecasting of IC flows	Continuous efforts on tracking categorization accuracy via self reporting, bank account category mapping directly in the tool and new forecast model IC and cash pool forecasting
	Ad hoc reporting for cash management decisions	Palm chat for daily/ weekly insights on cash management with slack integration for quick checks on cash position
	Manual variance analysis data “storage”	Palm “in house” reporting for VA snapshots with visuals + KPIs to monitor model including bias (optimism / pessimism) and improvements
Q2 26	Historical bank statements as the only source of data	1. Palm to pull AP/AR Data via BigQuery integration 2. Scenario planning to be enabled for growth assumptions
Q3 26	Decrease on forecasts accuracy from week 5 - week 13	New Palm forecasting architecture will be introduced aiming for higher forecast accuracy.
Q4 26		

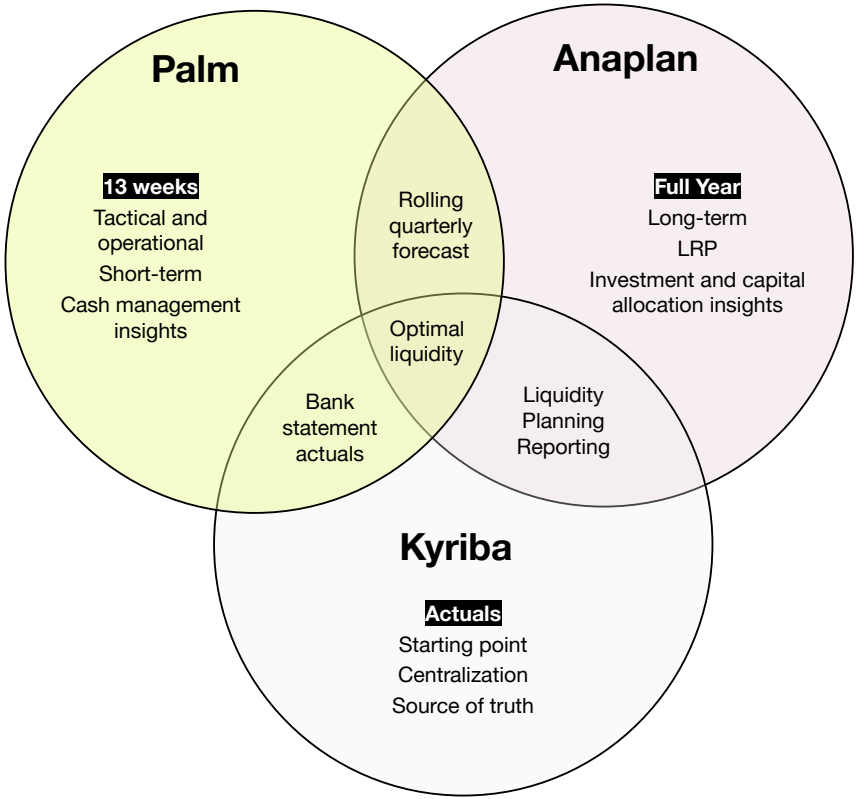
Ambitions 2026+

- AI insights on cash concentration optimization
- FX hedge vs. forecast tracking to identity open FX positions
- Expand the forecast over 13 weeks
- Activate Palm Chat via Gemini to take actions on: forecasting, recategorization and analysis

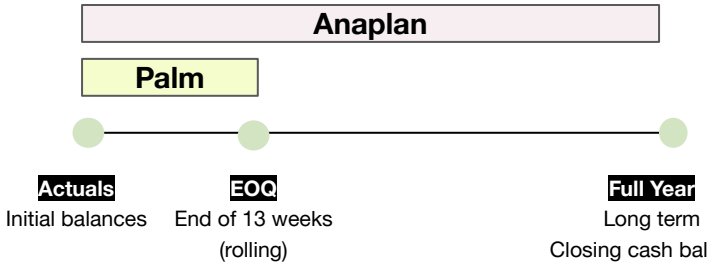
E2E CASH FORECASTING STRATEGY

Bridging daily cash management and long-range planning

Cash forecasting ecosystem



Cash forecasting timeline



We are moving from manual tracking to an Integrated Liquidity Ecosystem. These tools don't work in isolation, they depend on each other to give us full visibility and control across all time horizons:

- Kyriba: Shows us exactly where our cash is sitting in every bank account globally, right now
- Palm: looks at our history and forecasts what will happen on the next 13 weeks
- Anaplan: connects our cash to our big future plans "converting" the budget into a liquidity plan (long term cash forecast)

Use Case

1. The cash management “problem”: the Treasury Core Team needs to fund a new retail store in Sweden. They need SEK (Swedish Krona) and plan to convert excess EUR and DKK from the On AG accounts to get it.

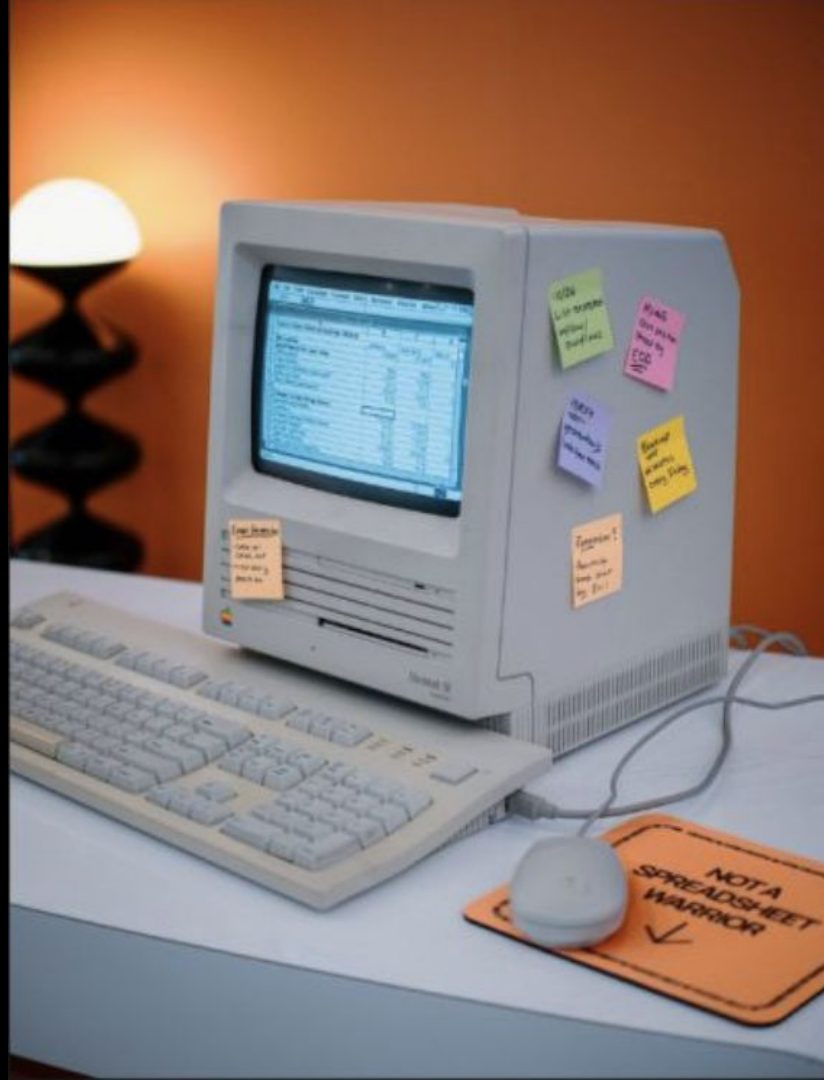
2. The first check with Palm: before moving a single cent, they check Palm. They need to ensure that the EUR and DKK they are about to "sell" aren't needed for bills in the next 13 weeks. Palm confirms: No large upcoming payments in EUR/DKK. The liquidity is safe to move.

3. The double check with Kyriba: next, they verify the actual SEK needs. They check Kyriba to see open Accounts Payable and Accounts Receivable. This confirms the immediate "Cash In/Out" gap that needs to be filled for the store opening.

4. The long-distance view: the team worries about future FX needs, they don’t want to convert money every week. They open Anaplan to check the long-term plan for On Sweden. They look at the estimates for the next 6–12 months to see if they should convert more now to prepare against future payments.

5. Collaboration (R&A Team): while checking Anaplan, the Core team notices a discrepancy: the Payables (expenses) for the Sweden project look much higher than the original plan. They flag this to the Reporting & Analytics (R&A) Team.

6. The Optimization Loop: the R&A Team performs a deep-dive Variance Analysis by category across tools. They discover why costs are higher and update the Anaplan models together with the Controlling team and the EMEA finance team. This ensures that the next planning cycle is more accurate, preventing cash shortfalls for the next store opening.



Use Case

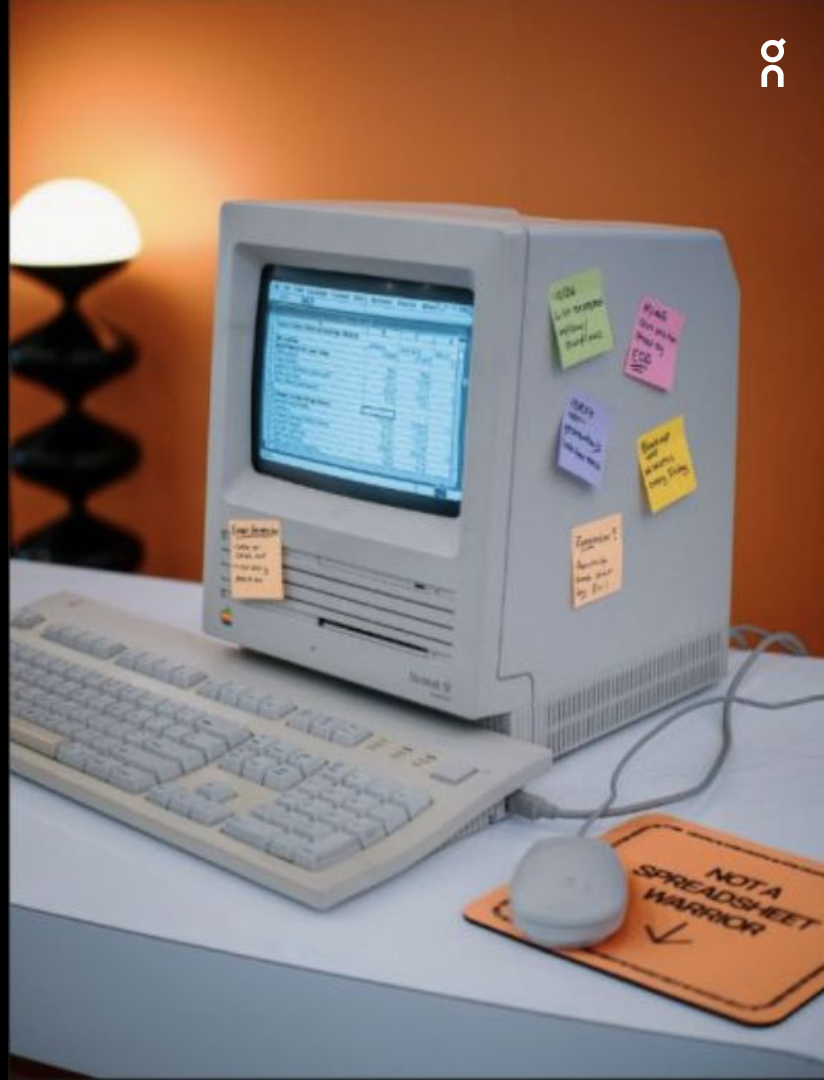
The Scene: It is Tuesday morning. Federico & Amanda log in to validate the liquidity position for the week and to investigate the FC.

The "Old" Reality: In the past, seeing a large deviation in On Inc or On Holding would trigger an immediate manual investigation: "*Is this a Kyriba error? Is it a real outflow?*" This uncertainty often required digging through raw data or sending emails to confirm if the variance was technical or operational.

The "New" Reality: Now, the workflow has shifted. Federico and Amanda they follow the methodology as their primary sanity check. They can immediately see that Palm has smoothed the variances historically seen in Kyriba.

- ***Real-World Example:*** **In W1 2026, instead of reacting to a static legacy figure of 987M, they saw Palm converging on 662M, a number that aligned far better with operational trends.**

The Result: This methodology acts as a daily "confidence layer." It allows Federico and Amanda to trust the signal and move from **Data Validation** to **Decision Execution** by 2:00 PM.



Thank you.

Questions.

Case study - AI Categorization Improvement

CAPEX Categorization

Targeted vendor Recall	Precision	Avg. Confidence
44%	100%	96%
up from 8.9%	up from 95.3%	up from 90%

Account	Amount	Currency	Category	Value Date	Description
UBS GBP ONAG CP CH2800206206458319 62K	-71,421.00	GBP	Cash out: Payables	2026-02-02	4 ONCH-0000000063-3 00002097 71421 DBIT 71421.0 71421 PMNT ICDT AUTT Z24 On AG Cyan Tec Syster 3954 Order // ONCH-0000000063-3 Order // ONCH-0000000063-3 Z24 ZD81030E11695614
UBS GBP ONAG CP CH2800206206458319 62K	-54,651.00	GBP	Cash out: Payables	2025-12-08	4 ONAG-0000003588-3 00097596 54651 DBIT 54651.0 54651 PMNT ICDT AUTT Z24 On AG Cyan Tec Syste 3916 Order // ONAG-0000003588-3 Order // ONAG-0000003588-3 Z24 ZD81342E11267614
UBS GBP ONAG CP CH2800206206458319 62K	-100,560.00	GBP	Cash out: Payables	2025-12-01	6 ONAG-0000003576-3 00096763 100560 DBIT 100560.0 100560 PMNT ICDT AUTT Z24 On AG Cyan Tec S 3910 Order // ONAG-0000003576-3 Order // ONAG-0000003576-3 Z24 ZD81335E11215866
UBS GBP ONAG CP CH2800206206458319 62K	-88,289.10	GBP	Cash out: Payables	2025-10-27	3 ONAG-0000003488-3 00092824 88289.1 DBIT 88289.1 88289.1 PMNT ICDT AUTT Z24 On AG Cyan Tec Sy Order // ONAG-0000003488-3 Order // ONAG-0000003488-3 Z24 ZD81300E14942423
UBS GBP ONAG CP CH2800206206458319 62K	-118,124.50	GBP	Cash out: Payables	2025-10-06	7 ONAG-0000003448-2 00091231 118124.5 DBIT 118124.5 118124.5 PMNT ICDT AUTT Z24 On AG Cyan Tec S 3869, 3871 Order // ONAG-0000003448-2 Order // ONAG-0000003448-2 Z24 ZD81279E14799597
UBS GBP ONAG CP CH2800206206458319 62K	-59,680.00	GBP	Cash out: Payables	2025-08-11	7 ONAG-0000003324-2 00087225 59680 DBIT 59680.0 59680 PMNT ICDT AUTT Z24 On AG Cyan Tec Syst ONAG-0000003324-2 Order // ONAG-0000003324-2 Z24 ZD81220E14498377

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Account	Amount	Currency	Category	Value Date	Description
UBS GBP ONAG CP CH2800206206458319 62K	-10,927.00	GBP	Cash Out: IC Financing	2026-02-16	8 ONCH-0000000111-1 00003373 10927 DBIT 10927.0 10927 PMNT ICDT AUTT Z24 On AG Cyan Tec Systems Ltd. 1 Red Rood Way B Order // ONCH-0000000111- Order // ONCH-0000000111- Z24 ZD81044E11792748
UBS GBP ONAG CP CH2800206206458319 62K	-1,029,747.25	GBP	Cash Out: Capex	2026-02-09	6 ONCH-0000000087-2 00002727 1029747.25 DBIT 1029747.25 1029747.25 PMNT ICDT AUTT Z24 On AG Cyan Tec Systems Ltd. 1 F HBUKGB4BXXX 3843, 3966, 3967 Order // ONCH-0000000087-2 Order // ONCH-0000000087-2 Z24 ZD81039E11749806

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