



# Automation and Efficiency in Treasury

Stephen Barr, Yinan Yu, and Eric Porter

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## Today's speakers



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Stephen Barr is the Product Manager for Chatham's SaaS treasury risk management platform ChathamDirect, and has launched SaaS products for the Valuation Services Team, the Pricing and Analytics team and Chatham's Debt Management System. Before Chatham, Stephen worked with two major financial software firms. Stephen has a BA from Harvard University.



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Yinan is a Director on the Accounting Advisory team, providing interest rate, foreign currency and commodity risk management solutions to corporate clients. Previously, she worked at EY in Assurance. She graduated magna cum laude from Bucknell University and earned her MBA at The Wharton School at the University of Pennsylvania.



**Eric Porter**

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Eric Porter is Vice President of Derivative Operations at GM Financial and manages the operations and accounting for a \$120 billion portfolio of interest rate and foreign currency derivatives. Previously, he worked at EY in Assurance with a focus primarily in the energy industry. He holds degrees in economics and accounting from Texas Christian University.

# Agenda

## Common challenges in Treasury

- Capturing, validating, and analyzing data

- Treasury operations for trade management and accounting

## Industry trends

## Insightful perspectives to stakeholders

- Client spotlight | GM Financial



# Your success is our mission

## Financial risk management solutions that take your organization further

Chatham Financial delivers financial risk management advisory and technology solutions to organizations across industries and around the world — helping companies maximize value in the capital markets.



**\$6.6 trillion** hedged notional since 1991



**3,000+** clients around the world



**200,000** end-of-day valuations run nightly



**3,000+** ISDAs reviewed annually



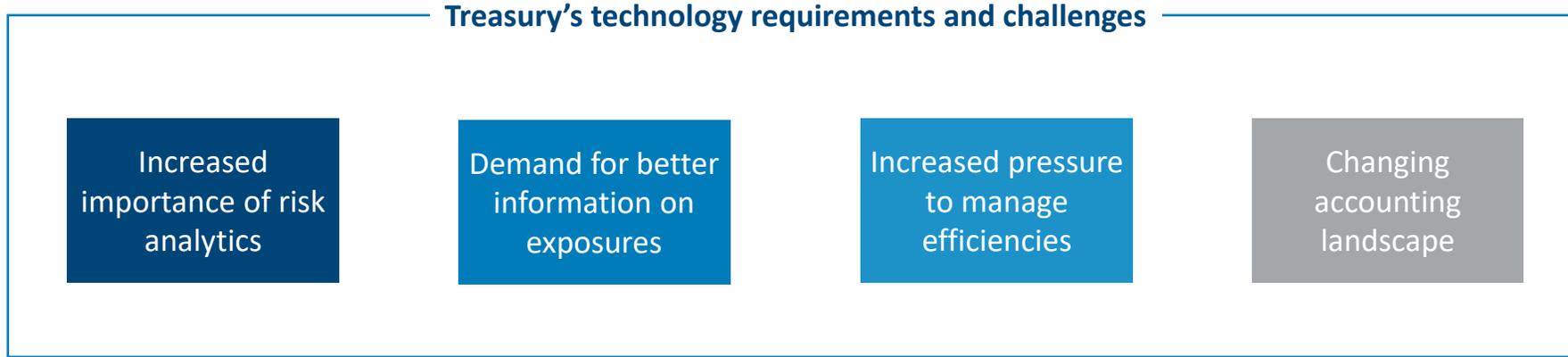
**Seven** global offices



**600+** employees

# Requirements on treasury technology continue to evolve

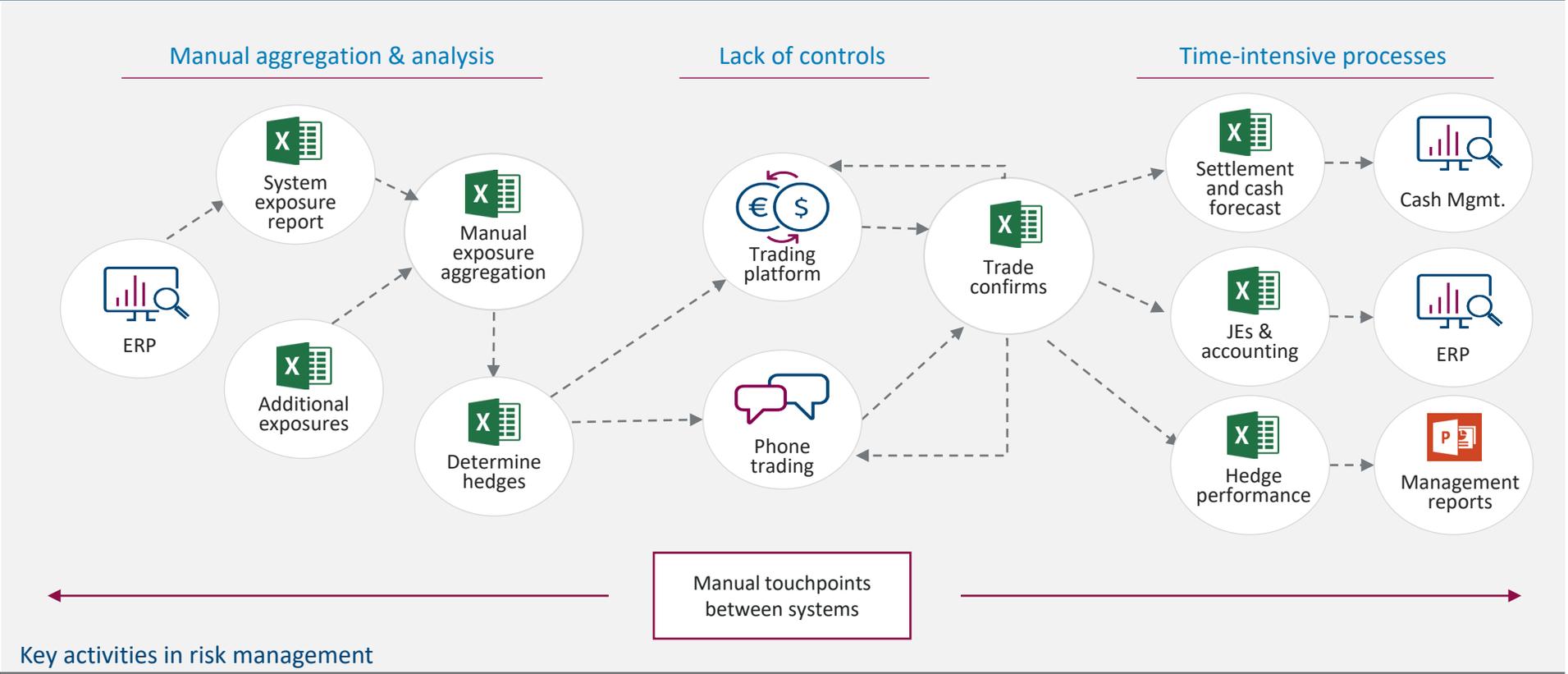
Treasury's core objective is to preserve liquidity and identify potential risks that threaten the financial position of assets. Such activities require flexible technology infrastructure that can support data integration, connectivity to trading platforms and automation of manual processes.



Treasury teams can gain efficiencies and streamline their daily operations with the help of automation.

# Hedging without a risk management platform

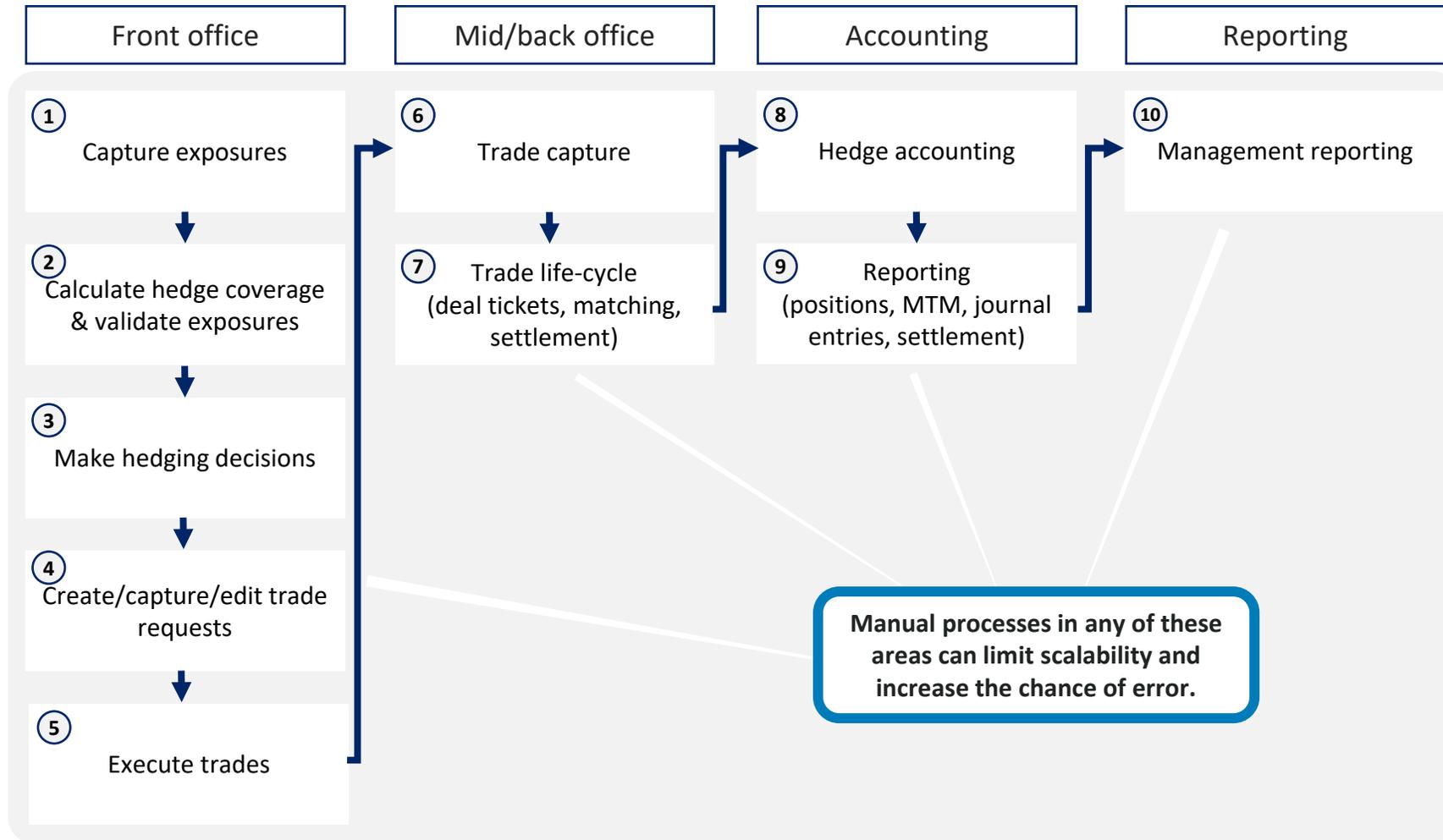
Manual processes lack controls and can ultimately lead to suboptimal financial performance



## Key activities in risk management

- |  |                             |                           |                       |                     |
|--|-----------------------------|---------------------------|-----------------------|---------------------|
| 1. Capture exposures                       | 3. Analyze risk             | 5. Build & approve trades | 7. Trade confirmation | 9. Hedge accounting |
| 2. Validate exposures & calculate coverage | 4. Make strategic decisions | 6. Execute trades         | 8. Hedge valuations   | 10. Reporting       |

# Top 10 jobs in FX risk management



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## Polling question

Which area of the top 10 jobs represents the greatest pain point for your organization?

- Front office (capturing and validating exposures, making hedging decisions, executing trades)
- Mid/back office (trade capture and matching)
- Accounting
- Reporting

## Capturing, validating, and analyzing data

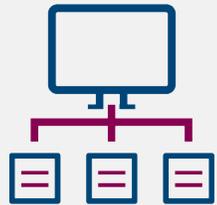


# Common challenges

## Key questions in the exposure aggregation process

Explaining program results to stakeholders often involves time-consuming tasks to gather data and validate exposures

### Exposure aggregation



*Where do we gather our data exposures from, and can we streamline the process?*

### Exposure validation



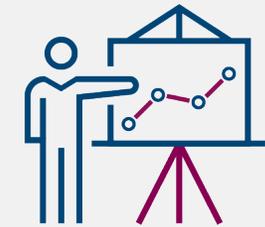
*How do we ensure the exposures gathered make up the complete data set?*

### Process efficiencies



*Are there better ways to track historical forecast trends?*

### Exposure variability



*How can we protect our risk with uncertain forecasting?*

Ensuring a complete, accurate, and detailed set of exposure data is paramount to running an effective risk management program.

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## Polling question

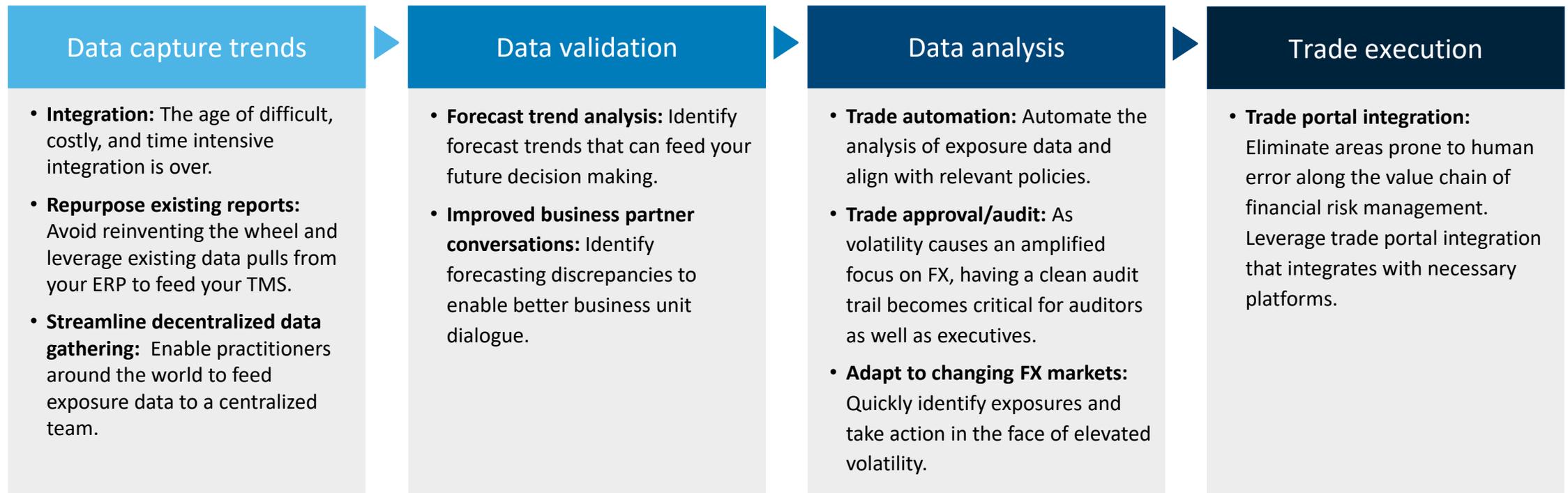
What is the biggest challenge in your current pre-trade activities?

- Ensuring data completeness
- Tracking down forecasts from business units
- Analyzing data to make trade decisions
- Executing trades
- Other

# Industry trends

## Capturing, validating, and analyzing data

As technology continues to advance, treasury practitioners are looking for new ways to automate old processes, and free them up to be better strategic business partners to the organization.



# Front office – FX risk hedging

## Leveraging technology

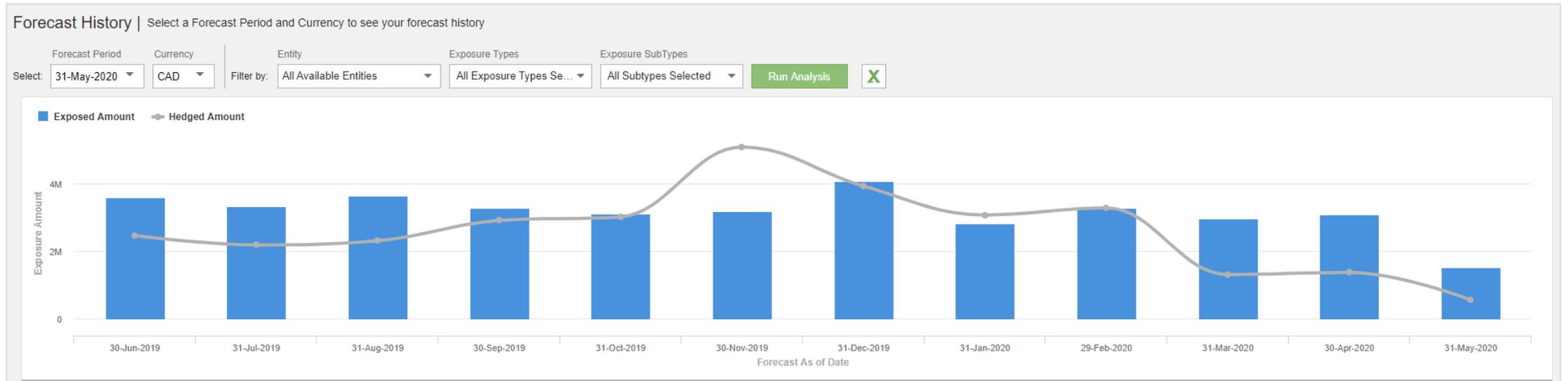
### Review exposures and hedge ratios

CAD							
Exposed	29,261,971.74	44.04%	1,513,902.24	36.39%	3,717,120.05	77.73%	3,739,194.08
Hedged	(12,887,259.69)		(550,916.28)		(2,889,151.83)		(3,135,517.21)
CHF							
Exposed	31,996,411.81	40.98%	2,148,764.48	41.38%	3,172,482.67	37.61%	3,728,292.64
Hedged	(13,112,308.51)		(889,082.75)		(1,193,307.01)		(2,095,878.69)

### Propose and approve hedges

FX Trade Execution Queue		Viewing: All Available Entities & UDFs
Maturity date:	All (22)	0-2 Days (10) 3-7 Days (1) After 7 Days (11)
APAC BU   Select All		
EXDASH-992	Buy - EUR 6,493,538.64	⋮ ✎ ☑ 🗑
EXDASH-993	Sell - EUR 5,297,340.86	⋮ ✎ ☑ 🗑

### Analyze forecast history



# Case study: Implementing a technology solution

A global retail company's Excel-based hedging process had become size-constrained and was unable to expand with its growing global footprint, leaving the company materially exposed to new-market risk.

## Company goals

- Migrate away from an excel-based solution to support scale.
- Achieve an auditable system of record.
- Align accounting process with best-in-class solution.

## Key activities

- Loaded current and historical data to support ongoing program and lookback needs.
- Aggregated thousands of rows of excel-based exposure data in dynamic, interactive dashboards.
- Automated valuations, journal entries and effectiveness testing through CHATHAMDIRECT™.

## Results

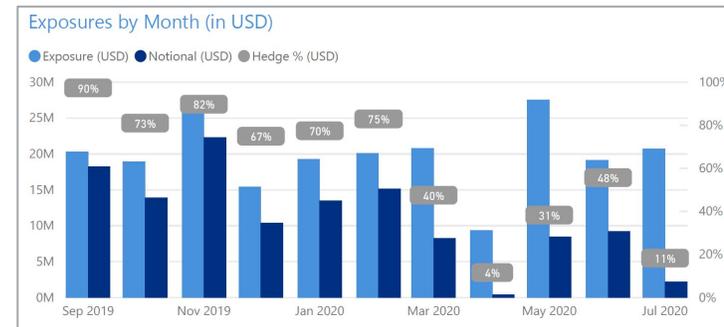
- Achieved real-time visibility into evolving exposures and the effectiveness of current hedging programs.
- Materially reduced manual month-end activities while simultaneously improving accounting processes.
- Implemented a scalable, technology-driven approach to cut ramp-up time needed for new currencies by 90%.

## Initial state

	Cash			Intercompany		
	USD	Rate	CAD	USD	Rate	CAD
Beginning Balance	(5,945,501)	1.30400	(7,752,934)	(65,398,849)	1.30400	(85,280,099)
A/R Receipts	7,011,272	1.3040	9,142,099		1.3040	
A/P Disbursements	(13,158,308)	1.3040	(17,158,433)			
Interco - ABC	3,500,000	1.3040	4,564,000	(3,500,000)	1.3040	(4,564,000)
Interco - XYZ		1.3040	-	-	1.3040	-
Other Intercompany		1.3040	-		1.3040	-
FX Buy/(Sell) USD	12,907,946	1.3170	17,000,000			
FX Buy/(Sell) USD	(2,317,390)	1.2946	(3,000,000)			
FX Buy/(Sell) USD		1.2610	-			
FX Buy/(Sell) USD		1.3473	-			
FX Adjustment		1.3024	-			
Other Adj.	(1,820,094)	1.3040	(2,373,403)	7,468,915	1.3040	9,739,465
Sell Securities	3,122,000	1.3040	4,071,088			
Buy Securities			-			
Other IC		1.3040	-		1.3040	-
IC Royalty Accrual			-		1.3040	-
IC Interest Accrual			-		1.3040	-



## End state



## Treasury operations for trade management and hedge accounting



# Common challenges

## Trade management and hedge accounting processes

Managing the trade lifecycle and ensuring proper accounting can be an ongoing challenge for many companies

### Treasury operations



*Handling trade confirmations, adjustments and settlement processes*

### Accounting setup



*Setting up new hedge accounting programs and ensuring appropriate inception documentation*

### Ongoing activities



*Monitoring period-end close processes and modifying hedged items when “critical terms” no longer match*

Many of these tasks can be automated or streamlined to gain efficiency and reduce the chance of error.

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## Polling question

How many hours does your organization spend each period on managing post-trade activities and hedge accounting processes?

- 1 – 4
- 5 – 10
- 10 – 20
- > 20

# Industry trends

## Trade management and hedge accounting

Taking advantage of system integration and automated workflows can free up treasury professionals for more strategic thinking.

### Integration

- **Centrally approved trade requests.** Allows easier pursuit of both best execution and spreading trade volume among relationship banks.
- **Trade confirmations can be handled system-to-system.** Integration with trade matching portals to ensure accurate trade details are captured and verified.
- **Trade settlement information exported reliably.** Connecting your risk system with your cash platform allows settlement information to be passed downstream.

### Automation

- **Inception testing and documentation.** Treasury and accounting professionals looking to minimize manual intervention to establish hedging relationships.
- **Daily valuation and period-end journal entries.** Ensuring both daily and period-end valuations and accounting processes occur without the need for triggering processes or keying in data.
- **Regression effectiveness testing to provide stronger support than CTM.** Getting hedge accounting into a system and out of Excel allows more robust testing that can be crucial in volatile market conditions.

# Automate complex hedge strategies through technology

## Triple regression effectiveness approach vs. CTM

*In the current environment, missed forecasts can be a major challenge under a critical terms match (“CTM”) approach. Corporations can take advantage of a longer time frame to comply with hedge accounting by leveraging system to do regression testing and handle multiple designation approaches.*

### Critical Terms Match

- Available for hedges that perfectly offset the hedged risk
- Generally the quarterly assessment of effectiveness is straight forward and can be performed qualitatively
- Challenges to Critical Terms Match over time:
  - Volatility and forecast uncertainty
  - Changes in the timing greater than one month for forecasted transactions
  - A mismatch in critical terms may lead companies to revert to a quantitative test if such an approach was outlined in the inception hedge accounting documentation

### Quantitative Windowed Approach

- Provides for greater flexibility if applied from outset
- For hedges of forecasted foreign currency cash flows, entities can define a longer time period during which the transactions are expected to occur (e.g., during a three-month period using ongoing “triple regression” quantitative testing vs. a one-month period under critical terms match)
- For hedges of interest rate risk, quarterly regression analysis can be a powerful tool for evaluating hedge effectiveness when changes occur to the hedged debt (e.g., changes in interest rate tenor or floors)

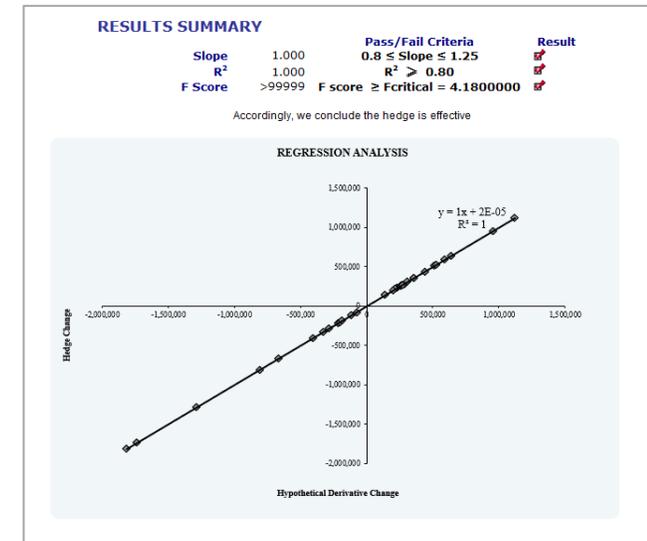
# Middle/back office

## Leveraging technology

Benefit from a dynamic trade repository

CHATHAMDIRECT	Exposures	Trading	Operations	Payments	Accounting	Reporting	Data																																																								
Dashboard >																																																															
Accounting Summary <span>No grouping</span> <span>Take Action</span>																																																															
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Automate effectiveness testing



Access hedge accounting reports

From Wednesday, July 31, 2019 To Saturday, August 31, 2019								
CRN	Portfolio 1	Sponsor Legal Entity	Cash (B/S)	FX Derivative Assets - Short-term (B/S)	FX Derivative Assets - Long-term (B/S)	FX Derivative Liabilities - Short-term (B/S)	FX Derivative Liabilities - Long-term (B/S)	0 Compr Incon
CFEXDASH2019073088	Forecasted Sales	European BU	0	23,104	0	0	0	
CFEXDASH2019073095	Forecasted Sales	European BU	0	169	0	0	0	
CFEXDASH2019073098	Forecasted Sales	European BU	0	113	0	0	0	
CFEXDASH20190730102	Forecasted Sales	European BU	0	458	0	0	0	
CFEXDASH20190730106	Forecasted Sales	European BU	0	2,873	0	0	0	
CFEXDASH20190730114	Forecasted Sales	European BU	0	0	0	(113)	0	
CFEXDASH20190730117	Forecasted Sales	European BU	(2,913)	0	0	0	0	
CFEXDASH20190730118	Forecasted Sales	European BU	0	0	0	(213)	0	
CFEXDASH20190730121	Forecasted Sales	European BU	0	0	0	(7,871)	0	
CFEXDASH20190730123	Forecasted Sales	European BU	0	0	0	(1,883)	0	
CFEXDASH20190730125	Forecasted Sales	European BU	0	0	0	(9,789)	0	
CFEXDASH20190730129	Forecasted Sales	European BU	0	0	0	(12,767)	0	
<b>Total European BU (USD)</b>			<b>(3,937)</b>	<b>100,688</b>	<b>0</b>	<b>(113,487)</b>	<b>0</b>	

Total European BU Transaction Count: 33

# Case Study: Advisory, technology, and operational support

Accounting support and technical expertise to create and administer hedge accounting programs for high volume and complexity interest rate programs

## Company goals

- Consolidate technology platforms and reduce time devoted to hedge accounting and management reporting.
- Leverage additional expertise in hedge accounting related to interest rate, and foreign currency exposures.
- Access market data and derivative positions real time to perform analytics and make strategic decisions.

## Key activities

- Onboarded onto ChathamDirect to create a more efficient and holistic risk management program.
- Provided accounting advisory and designation documentation surrounding new hedging strategies.
- Provided monthly financial reporting package to significantly improve the hedge accounting process.

## Results

- Became trusted accounting advisor on all hedge accounting topics, including technical accounting matters on existing platforms, new strategy development and various scenario analytics.
- Streamlined accounting and reporting processes by leveraging Chatham's operational support and reporting capabilities.



Providing insightful perspectives to stakeholders

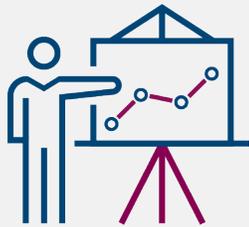


# Common challenges

## Management reporting

Explaining program results to stakeholders often involves time-consuming tasks to gather data and craft presentations that answer common questions.

### Valuations



*How are our trades changing in value over time?*

### Exposure management



*How exposed are we to different currencies or counterparties?*

### Forecast analytics



*How accurate are our forecasts?*

### Hedge coverage



*How hedged are our exposures?*

When something atypical happens or someone wants unexpected details, reporting can become a significant challenge.

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## Polling question

What do you rely on to create management reports on your risk management program?

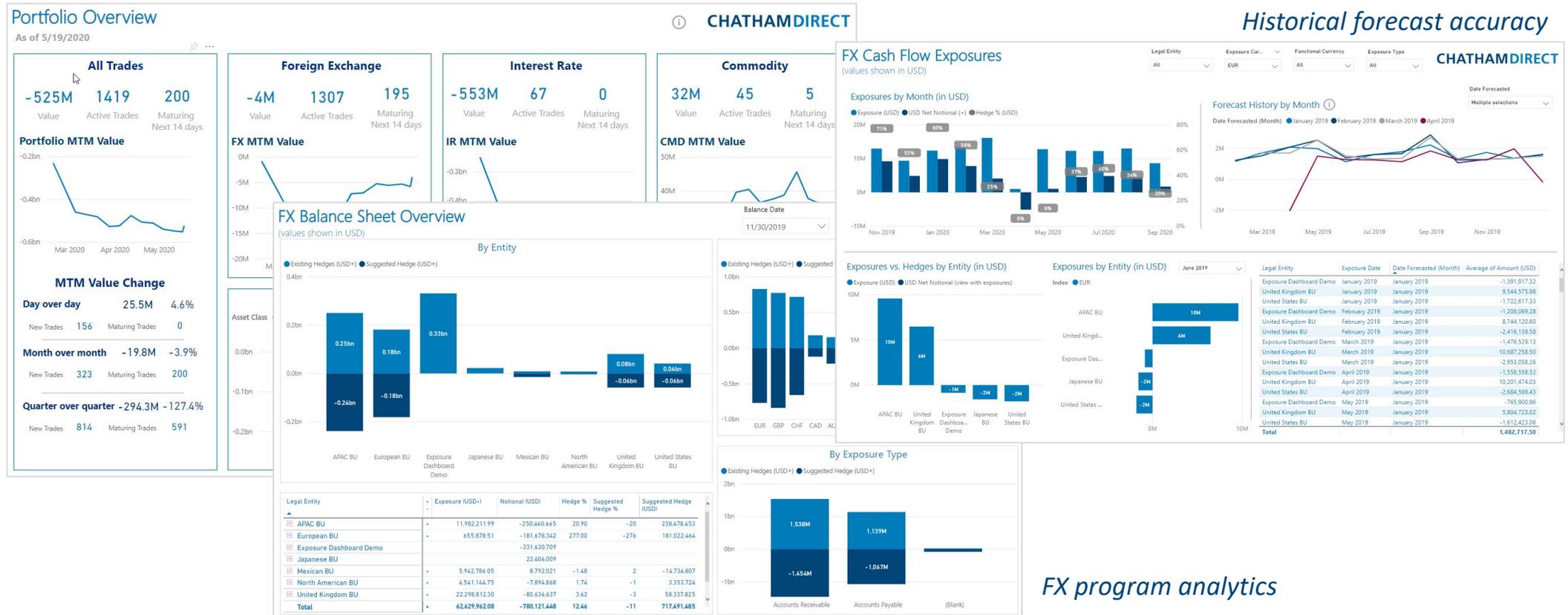
- Ad hoc creation of graphs and pivot tables in Excel
- Excel templates with macros to refresh the data
- Business intelligence tools
- Other

# Industry trends

## The growth of business intelligence tools

BI tools are starting to gain wider use within treasury teams for their dynamic visuals and increased automation.

### High level information on valuations and positions



FX program analytics

# Automation and efficiency in treasury

## Session conclusion

### Front office



Leverage technology to implement controls, gather and validate exposures, and make data-driven hedging decisions.

### Middle/back office



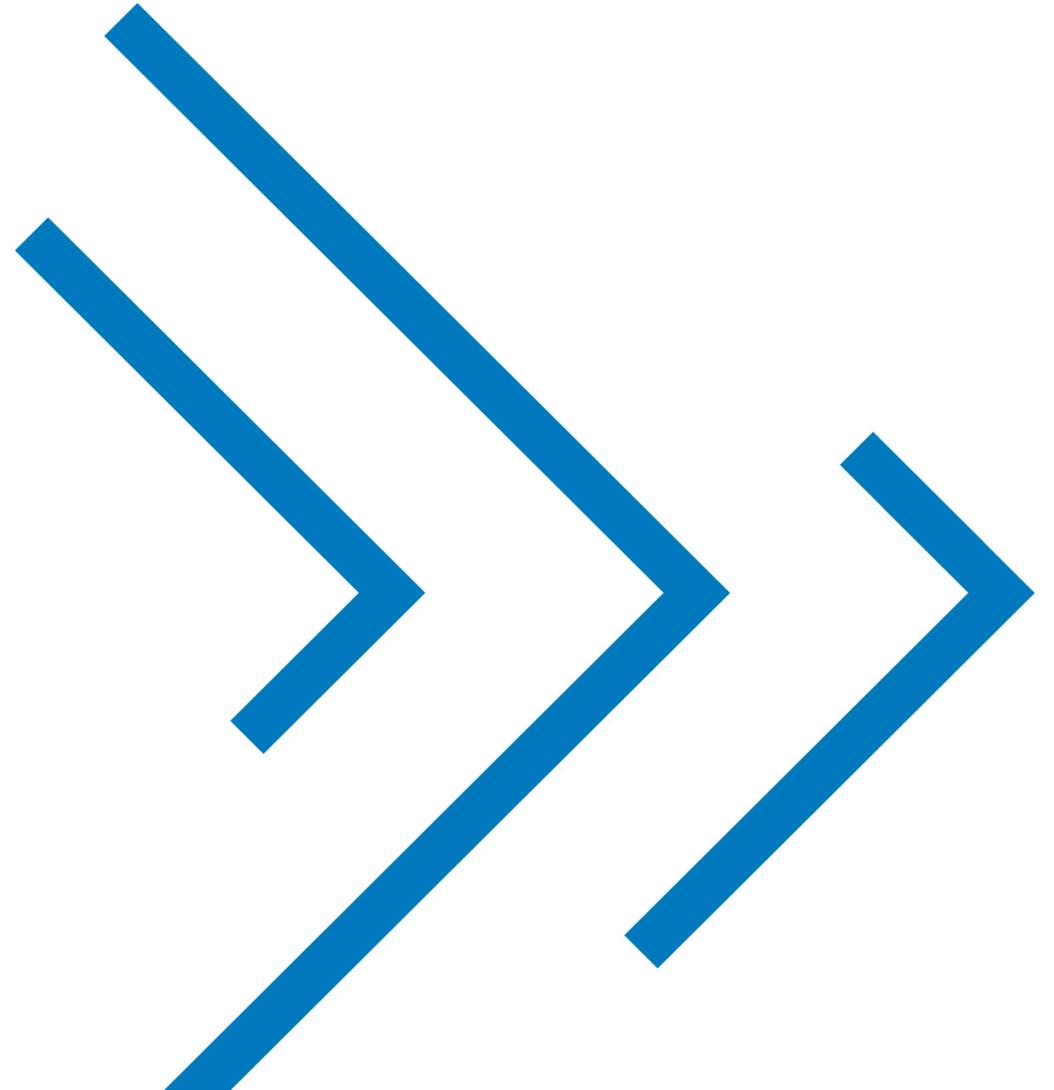
Automate time-consuming processes by integrating systems and removing manual touchpoints.

### Management reporting



Consider upgrading business intelligence to create greater visibility for management.

# Questions



# Thank you

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Access advantage

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