

# Modern Finance



Insights from Microsoft's Finance team  
on our digital transformation journey



“By adopting innovative technologies, finance will strengthen its business leadership and cultivate company growth through more efficient and productive allocation of resources and stronger compliance.”

Amy Hood, Executive Vice President  
and Chief Financial Officer, Microsoft

# *MODERN FINANCE*

## *DIGITAL TRANSFORMATION IN FINANCE*

Today's finance organizations face significant challenges to confidently make the next best decision for their company, their team, or their customers. We're addressing those challenges ourselves with technologies that enable our people to be more effective.

At Microsoft, we are on a journey not only to help our customers digitally transform but also to do so within our own business operations as well. Whether the challenge is rooted in growing revenue or allocating resources, technology is the shortest path to better, more confident action. But to bring technology to life, we must invest in our people.

With a growth mindset, we are encouraged to take risks and learn, and as a result, we can feel comfortable as an organization to embrace change. Through online training and academies, we're bringing our teams up to speed on the latest technologies and evolving into a modern finance organization. Here are just a few ways we are doing it.



## ***FINANCIAL ANALYSIS AND REPORTING: TRANSFORMING LEGACY SYSTEMS AND TOOLS***

Reporting is fundamental to every financial organization. It's essential that financial reports are accurate and timely, and include the right information to help business leaders make decisions and take action. Unfortunately, the reporting infrastructures of many organizations are hindered by legacy systems and tools. In these organizations, finance leaders can't effectively harness the power of data to drive insight and impact. Microsoft Finance is on a journey to transform our analysis and reporting. We are moving our financial data to the cloud, combining it with business metrics, and working with cross-functional teams to create powerful, dynamic reporting. With tools like Power BI and Excel connected to streamlined data sources, our teams can get insights faster and drive action. For example, our treasury chatbot answers thousands of customers' order and credit status queries, saving support teams over a thousand hours per month.

Microsoft Finance has had a  
**20% reduction** in time spent  
compiling and validating data  
saving over **150,000 hours** of  
work **every quarter**



# FINANCIAL ANALYSIS & REPORTING SOLUTIONS

## MICROSOFT FINANCE EXAMPLES



TOPICS	DESCRIPTION	TECHNOLOGY
Modern Business Management Portal	Consolidation and simplification of multiple, disparate reports, tools, and content into a simple, automated, role-based personalized portal built on a single source of truth -- an automated, role-based portal utilizing a modern Windows 10 app to surface data & insights from Azure KPI Lake via personalized Power BI views	Apportal – Win 10 app Office 365 Power BI SQL 2016 Azure IaaS/PaaS
Tax Analytics Portal	Created one tax data source, intelligent dashboards, and reports to enable real-time Transfer Pricing (TP) calculations. Multiple data sources consolidated on Azure, using business logic in SQL, and accessible by Power BI	Azure IaaS SQL 2016 Power BI Excel
Interactive Financial Statements	Built a platform to view and interact with company level financial statements in real time allowing drill down capability to line-item details and comments with rich visuals and analytics. This is a single source of financial statements on a simplified, interactive, and HBI digital platform (Azure, Power BI, Cortana Intelligence Suite)	Cortana Intelligence Suite Azure Web Application Cortana Natural Language SQL Server Power BI Embedded Azure Machine Learning Office 365
External Financial Reporting	Moved external financial reporting process from offline files in multiple locations to cloud-based tools in one secure and connected environment—a SharePoint service integrated with Office 365 to drive efficiencies and increase collaboration in the preparation and review of our Form 10K and 10Q	Azure SharePoint Office 365
Global Reviews on KPI Lake	Transformed our largest global business review rhythm by creating one source of truth stored in our cloud for both financial and business metrics and enabling self-serve analytics. Secure KPI Lake (SQL on Azure IaaS) with standardized data and KPIs from 100+ sources, accessible by Power BI, with rights managed by Azure Active Directory	Azure KPI Lake Azure Active Directory SQL on Azure IaaS Power BI





## **FORECASTING AND STRATEGY: USING DATA FOR INFORMED DECISION MAKING**

To navigate a climate of increased volatility and uncertainty, finance leaders are racing to harness ever-growing amounts of data and derive forward-looking insights. The standard tools of the past are becoming insufficient for this task. Modern finance leaders are embracing advanced analytics to move from backward-looking analysis to future-looking predictions and recommendations. Machine learning is a critical tool for predicting outcomes and managing risk. Microsoft Finance is now using machine learning and our Cortana Intelligence Suite across the organization to stay ahead of our business. We set out to drive greater accuracy and increase the frequency of our forecast updates, and are seeing the realization of both goals. In fact, with our machine learning forecast solution that combines the best of human and machine intelligence, we've cut our forecast variance in half over the last six quarters.



Incorporating Azure Machine Learning into our revenue forecasting process allowed us to **cut forecast variance by 50%** and augment the work of our analysts to lock financial outlooks faster and with more confidence.

# STRATEGY & FORECASTING SOLUTIONS

## MICROSOFT FINANCE EXAMPLES



### TOPICS

Machine Learning  
Revenue Forecasting

### DESCRIPTION

Augmented current financial forecast with a machine learning forecasting solution combining best of human and machine intelligence. Azure Machine Learning stored in Azure Data Factory and Azure SQL Database, and accessed with Power BI

### TECHNOLOGY

Cortana Intelligence Suite  
Azure Data Factory  
SQL Server  
Azure SQL  
Azure Machine Learning  
Power BI

Machine Learning  
Accounts Receivable  
Forecasting

Augmented manual Accounts Receivable (AR) collections forecasting with a machine learning forecasting solution enabling Microsoft Treasury to improve management of FX exposures. An automated AR forecasting process using Azure Machine Learning Studio in the Cortana Intelligence Suite

Cortana Intelligence Suite  
Azure Machine Learning  
Power BI

Predicting Xbox  
Game Volume  
(Products Trends)

Incorporated Microsoft Pulse customer sentiment analysis into Machine Learning models to drive greater accuracy in our game volume forecasts

Azure Machine Learning  
Cortana Intelligence Suite  
SQL 2016  
Power BI



## ***BUSINESS PROCESS AUTOMATION: ENABLING GREATER EFFICIENCY THROUGH TECHNOLOGY***

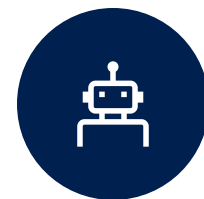
While critical to an organization's success, some finance tasks are repetitive and often tedious. Because of the need to complete these tasks accurately and in a timely manner, organizations traditionally have employed large teams to support and manage these finance workloads. Modern finance is finding ways to streamline, centralize, or outsource manual activities through robotic process automation (bots). Technology is now providing the mechanism to reduce costs and error rates while improving the quality and speed of these finance processes. These activities significantly reduce manual workloads and allow teams to spend more time on strategic actions.



Chatbots reduced support cost savings by **30%+** and allowed for **Multi-language support** for tickets

# BUSINESS PROCESS AUTOMATION SOLUTIONS

## MICROSOFT FINANCE EXAMPLES



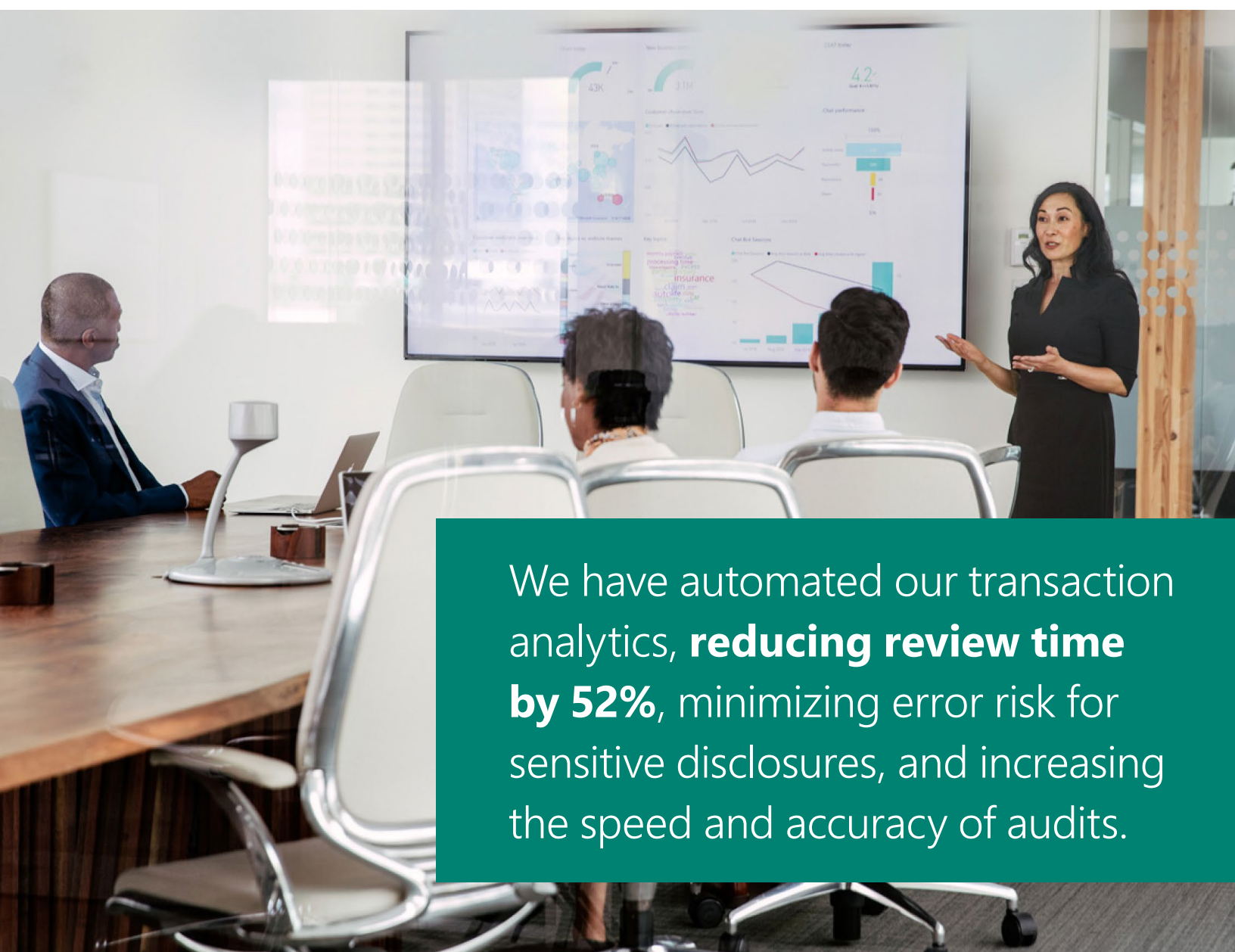
TOPICS	DESCRIPTION	TECHNOLOGY
Finance Operations Chatbot	Azure Bot Service integrated with Skype for Business, providing responsive single user interface. Integrated with Cortana for a web-based, mobile application	Azure Bot Service Bing Translation Skype for Business SQL 2016 SharePoint Office 365 Azure Blob Storage Azure LUIS
Credit and Collections Chatbot	Created a chatbot to reduce ad-hoc requests about customers' orders and credit status. Azure Bot Service and Cortana Intelligence Suite providing responsive single user interface	Azure Bot Service Microsoft Teams Azure App Service Azure LUIS SQL Server
Financial Management Reporting Automation	Automated the refresh and preparation of over 10,000 monthly queries from various Microsoft source systems to create 1,500+ unique financial management reports, saving significant shared service center costs and eliminating human error.	Azure Bot Service Microsoft Teams Azure App Service Azure LUIS SQL Server
Contracts Setup Automation	Royalties contracts that were humanly read and manually set-up are now done by robots. We programmed bots to read PDFs, extract relevant data (name, address, payment terms, etc.) from the contract and enter them into a Royalties Calculation System.	Azure Machine Learning Cortana Intelligence Suite SQL 2016 Power BI
Tax Report Automation	Created a bot to optimize the Tax Variance Report, reduce costs, and increase compliance and efficiency. Created a bot to automatically login into applications, run reports, consolidate data, gather customer invoices and prepare for variance analysis.	Azure SQL 2016 SAP MS Invoice Excel Kyron Systems (LEO) (partner product)





## ***RISK MANAGEMENT: HARNESSING TECHNOLOGY TO MITIGATE AND PROACTIVELY MANAGE RISK***

Finance leaders are facing an ever-growing risk landscape because of many factors, including geopolitical turmoil, regulatory reforms, market instability, and cyber threats. Many are reacting to threats, rather than proactively managing issues before they arise. Modern finance is taking an ever-larger role in risk management that goes beyond traditional financial risk and compliance. Microsoft Finance is harnessing the power of the cloud to create early warning systems and tools that help us proactively manage risk.



We have automated our transaction analytics, **reducing review time by 52%**, minimizing error risk for sensitive disclosures, and increasing the speed and accuracy of audits.

## RISK MANAGEMENT SOLUTIONS

# MICROSOFT FINANCE EXAMPLES



TOPICS	DESCRIPTION	TECHNOLOGY
Global Policy Tool	Simplified and centralized all Microsoft global policies into a secure cloud portal to increase compliance and improve user experience. All global policies hosted in a centralized and searchable repository using SharePoint and Word Online	Office 365: SharePoint Online Word Online
Compliance Predictive Analytics	Built a risk analytics platform on Azure to provide comprehensive coverage of all sales transactions, with predictive machine learning based capabilities, driving a systematic review process, and focus on high risk transactions. Data centralized in Azure SQL, leveraging data analytics, with an integrated action framework layer in Web Apps and Power BI providing front-end visibility.	SQL Azure (PaaS) Azure Analysis Services Azure Blob Storage & Active Directory Azure Web Apps (SaaS) Power BI
Blockchain (Treasury)	Implementing blockchain based Standby Letter of Credit process would improve process, efficiency, and effectiveness. Blockchain as a Service (BaaS) implemented with banking partner.	Azure Blockchain as a Service (BaaS)
Smartlink	Link financial data supporting earnings release deliverables such as scripts, press releases, SEC Form 10-Q/K, etc. directly from Excel into Word to eliminate manual data entry, reduce risk of error and inconsistency across documents, and streamline the audit process. Office 365 add-in to connect Word and Excel through a SharePoint environment	Azure Office 365 Word and Excel add-ins SharePoint Online