

# Artificial Intelligence, Robotics and API

**Maryland Government Finance Officers Association** | January 2020

Brian S. Anderson, Executive Director, Wholesale Payments

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**J.P.Morgan**

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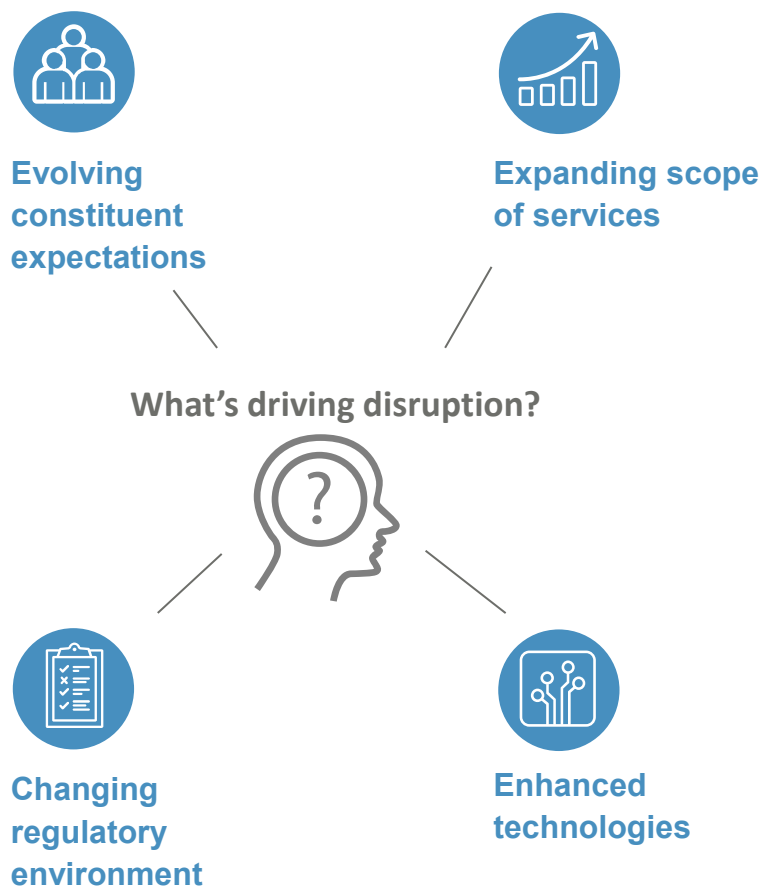
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## What's shaping your industry?

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Today, new and emerging technologies are redefining the way many municipalities approach finance



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### Thriving in today's market:

- ✓ Harness the power of innovation
  - ✓ Go digital
  - ✓ Continuously improve products, services and business models
  - ✓ Simplify transactions
  - ✓ Automate and streamline connectivity
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## New Technologies Defining the Next Generation of Treasury Management

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Robotic Process  
Automation (RPA)

- Software that is programmed to automate a business process from end-to-end



Cloud

- Delivery of on-demand computing services over the internet



Big Data

- Voluminous data that has the potential to be mined for information



Machine Learning

- Computer programs that can access big data and use it to learn for themselves



API

- Software programs that transfer data between two applications on demand



Blockchain

- Shared digital ledger amongst members of a network

## 7 key forces that will drive a sizable shift in corporate treasury over the next 7 years

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### 01 **INCREASING PACE OF CHANGE**

Landline telephone took 75yrs to hit 50M users, electricity took 46yrs, Twitter took less than 2yrs, Angry Birds took 35 days<sup>1</sup>

### 02 **INDUSTRY DIGITIZATION & DISRUPTION**

Digitization will have a \$100Tr impact through 2025<sup>2</sup>

### 03 **CHANGING TREASURY EXPECTATIONS**

80% of treasurers agree treasury will be playing a more strategic role 3yrs from now<sup>3</sup>

### 04 **CHANGING WORKFORCE**

Millennials will make up 75% of the workforce by 2030<sup>4</sup>

### 05 **BANKING DIGITIZATION & DISRUPTION**

80% of traditional financial services firms will go out of business by 2030<sup>5</sup>

### 06 **MACRO GLOBAL SHIFTS**

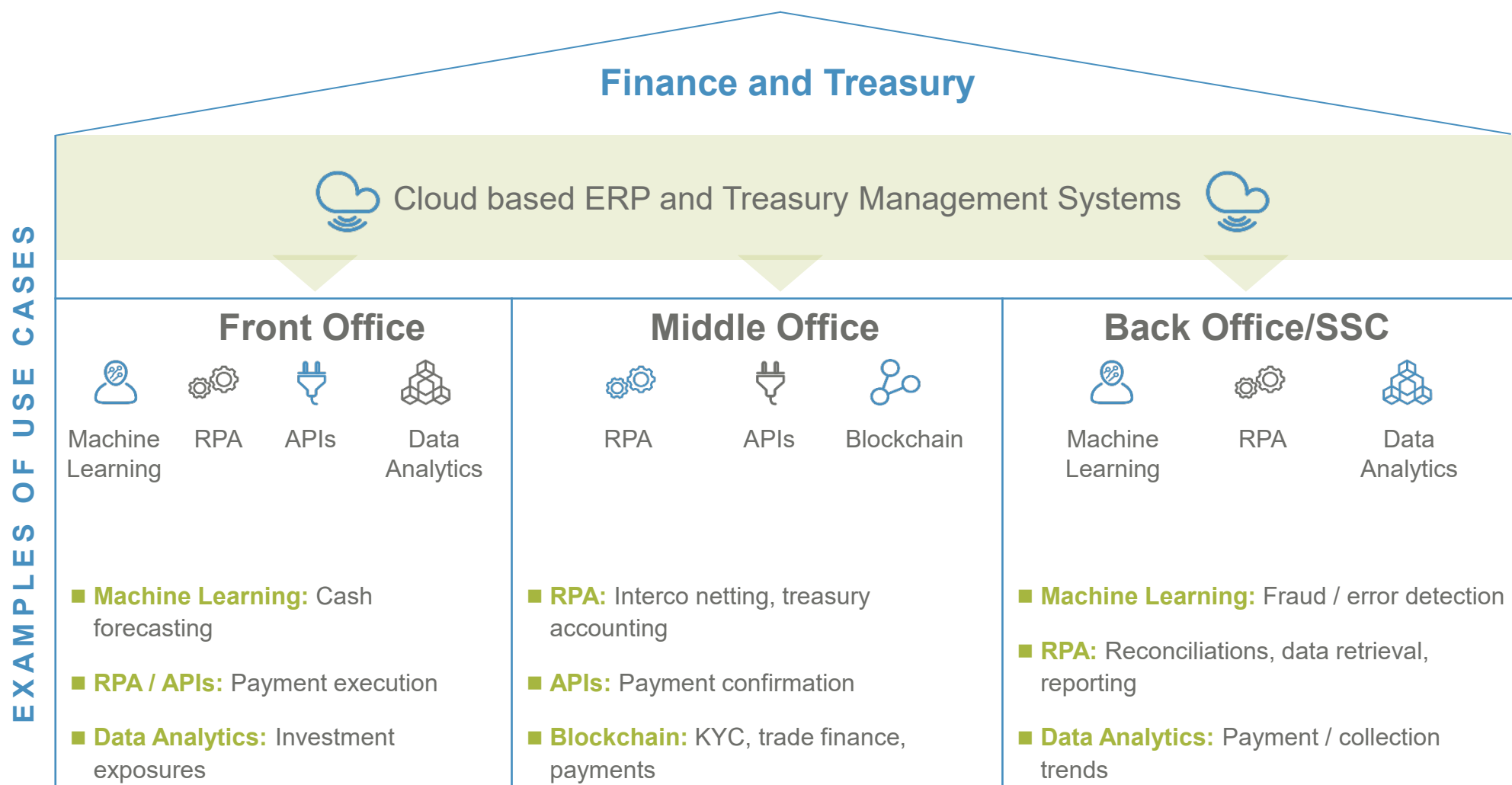
“Vast majority of CEOs believe that economic and financial volatility will increase over the next 12 months”<sup>6</sup>

### 07 **OPPORTUNITIES OF EMERGING TECHNOLOGY**

>130Bn connected devices by 2030<sup>7</sup>  
AI will increase labor productivity by 40% through 2035<sup>8</sup>

# New Technologies Transforming Finance and Treasury Management

Technology is making a significant impact across a whole spectrum of finance and treasury functions



# Robotic Process Automation (RPA) Use Cases in Treasury Management

## Current



### Reconciliations

- ✓ Bank account reconciliation
- ✓ Identify and verify information in payment advice emails for cash application



### Data retrieval & reporting

- ✓ Intra-day and end of day bank statements
- ✓ Multiple ERPs



### Transaction management

- ✓ Master data set-up (maker) e.g. multi-department
- ✓ Payment creation (maker)



### Document preparation

- ✓ Bank administration letters



### Credit management

- ✓ Chatbots for addressing inquiries

## Possibilities



### Investment execution & confirmation (rules based)

- ✓ Obtain real time price quotations
- ✓ Deal execution



### Advance reporting

- ✓ Compare forecasts against actuals
- ✓ Consolidate multi-department cash & investment exposure forecasts
- ✓ Calculate treasury dashboards / performance benchmarks
- ✓ Regulatory reporting



### Create accounting entries

- ✓ Inter-agency netting entries
- ✓ Treasury payments



### Risk management

- ✓ Calculate exposures – counterparty / investment

# Machine Learning Use Cases in Treasury Management

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## Current

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### Forecasting

- ✓ Cash receipts and payments
- ✓ Working capital requirements



### Fraud & error detection

- ✓ Detect payment fraud anomalies
- ✓ Identify errors in bank charges

## Possibilities

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### Reporting

- ✓ Detailed transaction analytics on payment and collection trends



### Risk management

- ✓ Stress testing – interest rates, exposure
- ✓ Interpret regulations and ensure trades, customers and vendors are compliant



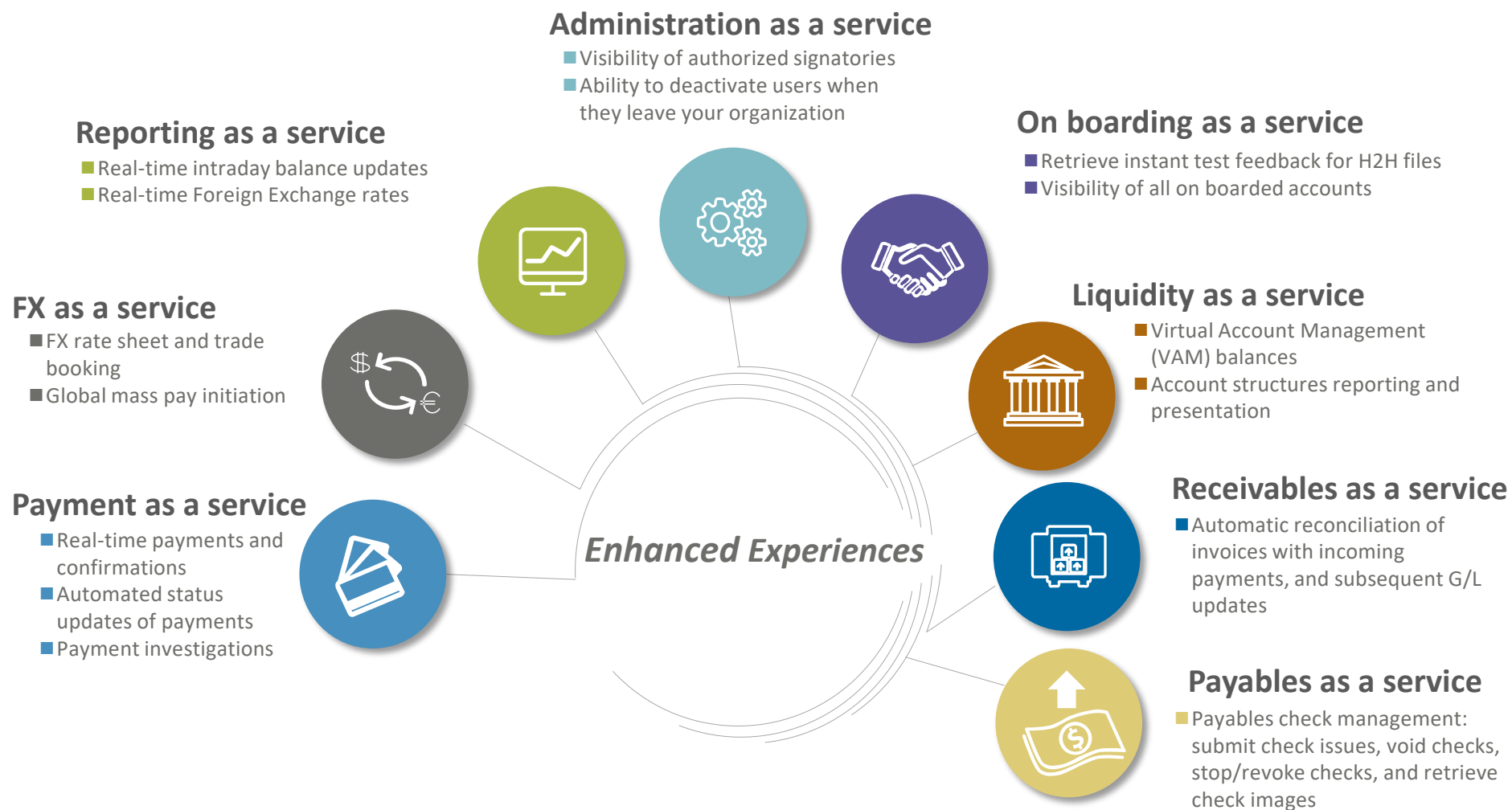
### Create accounting entries

- ✓ Treasury payments



## Potential API use cases across Treasury Services

APIs can power enhanced experiences for you



# How we see a possible day in the life of SAM

A finance manager in 2030



**6:30AM**

## Beginning of Day Updates

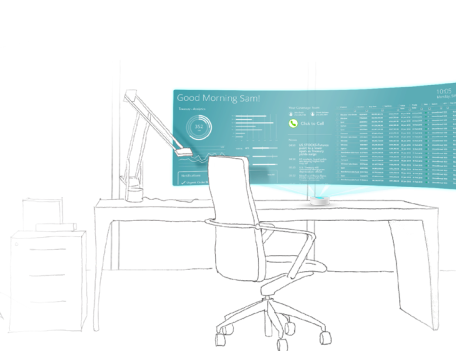
- Virtual Assistant
- AI Powered analysis & recommendations



**8:00AM**

## Cash Visibility & Forecasting

- Dynamic, real-time, multi-bank dashboard
- APIs
- Highly curated content



**9:00AM**

## Investigate Errors/Analyze Unexpected Events

- Seamless omni-channel experience
- Rich data visualization
- Powerful scenario & risk analysis toolkit



**10:00AM**

## Monitor Treasury Transactions & Bank Relationships

- Prioritized alerts & notifications
- Digital onboarding & account opening

# How we see a possible day in the life of Sam

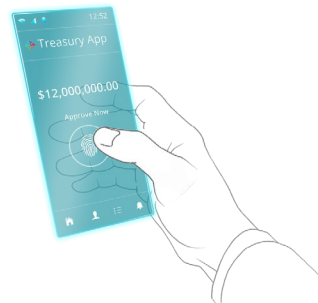
A finance manager in 2030...



**11:00AM**

## Advise Treasurer / Controller

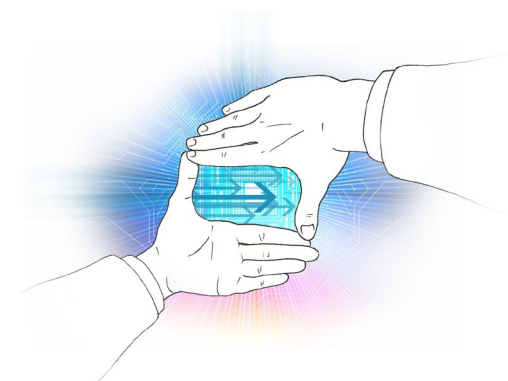
- 
- Data analytics platform
  - Powerful scenario & risk analysis toolkit



**1:00PM**

## Approve Payments

- 
- Biometrics
  - Mobility
  - Real-time ERP payments



**1:30PM**

## Experiment with New Tech

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- Technology sandbox
  - Engagement in innovation discussions

# How we see a possible day in the life of Sam

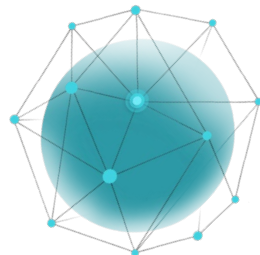
A finance manager in 2030....



**2:00PM**

## Manage Treasury Team

- On-demand workforce
- Digital collaboration space



**3:00PM**

## Manage Risk

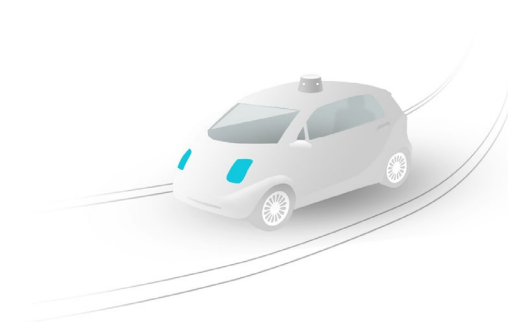
- Self service fraud tools & Training
- Emerging threat to communities
- Fraud-as-a-service



**4:30PM**

## Execute Treasury Transactions

- Treasury AI
- X-as-a-service



**6:00PM**

## Make Payments & Collect Money

- New payment networks
- Alternate payment types
- Smarter financial network

## Closing and Questions

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“We continue to make large investments in technology, including AI, cloud, digital and payments, as well as other investments in innovation, talent, security and risk controls. These actions will help us continue to grow and serve our clients going forward.”

Jamie Dimon, January 2020  
- Full year 2019 earnings press release

### Local Representative

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