



Cash Management Tools to Improve Cash Flow & Bidding Banking Services  
Presented by Krystle M. Kite, SVP/ Treasury Management

1

## Improve Cash Flow By Speeding up Accounts Receivables

### Cash Management Tools that Speed Up Receivables

- ACH
  - Traditional ACH (Incoming and ACH Debits)
  - Same-Day
  - UPIC
- RDC
  - Image Cash Letter
- LBX
  - AR Box (Electronic LBX)
- Cash Vault Services
  - Smart Safes
- Incoming Wires
  - Reverse Wires
- Real-Time Payments (Receipt)
- Electronic Invoicing
- Integrated Receivables
- Merchant Processing
  - IVR

Living our mission to improve the financial lives of our neighbors and their businesses.

2

2

# Incoming ACH Benefits

## Advantages of Incoming ACH Payments

- Speed & Improved Cash Flow
- Convenience
- Security
- Accuracy
- Lower Cost

### What to look for in an ACH Platform:

- Virtual terminal capabilities
- Real-time verification
- Recurring transaction capabilities
- Push notifications
- Robust reporting
- Cutting-edge security with tokenization
- Ability of both ACH and credit card processing through the same gateway, if you plan to do both

Living our mission to improve the financial lives of our neighbors and their businesses.

3

3

# Same-Day ACH

## Receiving Payments Faster

### ACH Schedules and Funds Availability

Processing Window	ODFI Deadline	RDFI Receipt Time	Settlement	Credit Funds Availability Requirement
First Same Day ACH Window	10:30 a.m. ET	12 noon ET	1:00 p.m. ET	1:30 p.m. RDFI Local Time
Second Same Day ACH Window	2:45 p.m. ET	4:00 p.m. ET	5:00 p.m. ET	5:00 p.m. RDFI Local Time
Third Same Day ACH Window	4:45 p.m. ET	5:30 p.m. ET	6:00 p.m. ET	End Of Processing Day
Next Day ACH	2:15 a.m. ET	Throughout banking day according to ACH Operator schedule – last file 6:00 a.m. ET	8:30 a.m. ET	On Settlement Date
		If received prior to 5:00 p.m. RDFI local time	8:30 a.m. ET	9:00 a.m. RDFI Local Time



[nacha.org/sda](https://nacha.org/sda)



4

4

# Universal Payment Identification Code (UPIC)

## Making Incoming Payments Easier & Safer

A Universal Payment Identification Code (UPIC) is an identifier (or banking address) for a bank account in the United States used to receive electronic credit payments. A UPIC acts exactly like a US bank account number and protects sensitive banking information. The actual bank account number, including the bank's ABA routing transit number, are masked by the UPIC. Only credit transactions to an account can be initiated with a UPIC. All direct debits are blocked, which should mitigate unauthorized transactions to an account.

### Other benefits of UPICs include:

- UPICs mask confidential banking information, reducing the risk of fraud while facilitating secure electronic payments.
- UPICs are restricted to credit payments, preventing unauthorized debits.
- UPICs remain with the customer regardless of banking relationships, making any change of bank or account transparent to trading partners.
- UPICs point to a single bank account. However, one account can have several UPICs

### Concerns with UPIC include:

UPICs only work for NACHA's Automated Clearing House (ACH) credit transactions. Fedwire credits cannot use UPICs.

A bank must use the Electronic Payments Network for ACH processing to issue UPICs.

Living our mission to improve the financial lives of our neighbors and their businesses.

5

5

# Remote Deposit Capture

- Accelerate clearing and funds availability via same day deposits.
- Eliminate the physical transportation of checks.
- Reduce the time it takes to deposit customer's checks.
- Gain faster access to funds.
- Lower check processing costs.
- Simplify your payment processing.



### When you don't use RDC you're at risk of:

- Lost productivity
- Risk of lost interest gained
- Shorter deposit times
- Increased time/expense of making a physical deposit
- The need to be near a branch office

Living our mission to improve the financial lives of our neighbors and their businesses.

6

6

# Image Cash Letter

Optimize your check processing while lowering costs and minimizing risks

Image Cash Letter (ICL) solution allows entities to capture images of paper checks drawn on U.S. banks, along with associated payment data, and transmit to their bank for clearing and settlement. ICL service offers you an opportunity to significantly lower operating costs by moving from a paper to image processing environment.

## Image Cash Letter Features:

- **Industry Standard Format:** Prepare images and related data in the industry standard X9.37 image cash letter format.
- **Secure File Transfer:** Entities will transmit their image cash letter files to the bank using secure communication protocols. You can send one file at the end of the day or multiple files throughout the day.
- **Centralized Deposits:** The image cash letter deposit can include check payments from all of your processing locations. The image cash letter will be verified and the funds credited to the entities' account. Checks will be sent to the Federal Reserve for presentment to the paying banks.

## With Image Cash Letter processing, you will benefit from:

- **Accelerated Availability:** Electronic images allow for faster clearing of checks and funds availability in your account
- **Increased Efficiency & Reduced Expenses:** Eliminate the time, cost and risks of transporting paper checks to the bank for clearing. Scan checks at your processing location and send files to the bank throughout the day
- **Fraud Protection:** ICL Service helps you mitigate check fraud by accelerating return item notifications

Living our mission to improve the financial lives of our neighbors and their businesses.

7

7

# Lockbox Processing

Using lockbox services can add value including some of the following, tangible benefits

- **Faster payment processing:** In order to minimize mail, processing and deposit time, a lockbox may be the right service to meet your needs. Lockbox services are specifically designed to compress the amount of time a check is in the mail and ultimately deposited into your business' account. Banks specialize in taking the delays out of the process by collecting and promptly depositing the checks for you. This is especially beneficial if you have customers in a large region or across the country. Banks can set up special post office boxes in key geographical areas, cutting back on transit time for payments.
- **Improved receivables management:** Having a bank process payments on your behalf supports your audit controls and improves accuracy of your data management. You can opt to have a data file created for uploading directly into your accounting system to close out open receivables. It also improves your client service as payments are received and recorded with minimal delay.
- **Accurate and timely information:** One of the most beneficial aspects of lockbox services is that you receive timely information on the receipt of your payments as the deposits are processed. This gives you immediate visibility to your cash flow.

Living our mission to improve the financial lives of our neighbors and their businesses.

8

8

# Electronic Lockbox

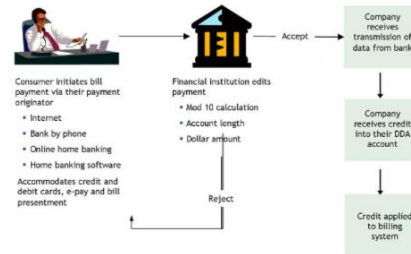
## E-Lockbox , also called AR Box:

Is an efficient and streamlined process to collect incoming payments that have been originated by consumers using numerous banks, financial institutions, collection agencies or walk-in payment centers.

### Questions to discuss internally:

- Do payments coming to you via a online check from these types of bill-payment providers that requires manual data entry?
- Are you getting transmissions of these payments from multiple sources such as CheckFree, Metavante, Online Resources, Western Union, IPay, etc.?

If yes, E-Lockbox is a solution to help you streamline these payments by having the bank intercept them to be converted into an ACH before hitting your account. This solution increase efficiency and consumer satisfaction.



Living our mission to improve the financial lives of our neighbors and their businesses.

9

9

# Vault Services

## Convenient Access, Streamlined Delivery

Cash Vaults combines protection with efficiency. And with this service you can:

- **Reduce employee risk:** Use an armored courier to carry cash to and from our vaults.
- **Access funds faster:** Receive same day credit for cash and checks received by the published deadline. Streamline reconciliation and reporting with desktop account access.
- **Save time on transaction research:** Search online for deposit and adjustment information by account number, location number, date range, and dollar amount, or choose to receive detailed reports by email.
- **Place orders easily:** Make coin, currency, and supply orders through a variety of convenient methods. You receive a verbal or printable confirmation after you place your order. Available order channels include online ordering, automated touch tone system, operator-assisted phone call.

Living our mission to improve the financial lives of our neighbors and their businesses.

10

10

# Smart Safe Vault Services

## Convenient Access, Streamlined Delivery

### Smart Safe Benefits:

- Deposit cash from your office for credit at the bank
- Reduce the number of armored car pickups
- Reporting capabilities
- Transactions tracked by Employee ID
- Faster access to working capital
- Money stored in safe until armored car pickup
- Built in change order capabilities
- Dual control safety features
- Reduce/ Avoid Internal theft



Living our mission to improve the financial lives of our neighbors and their businesses.

11

11

# Incoming Wire Benefits

## Advantages of Incoming Wires

### There are three main reasons to request a wire transfer:

- **Speed:** Wire transfers are usually faster than paper checks and traditional ACH, and you can use the funds immediately.
- **Safety:** Compared to check and cash, a wire transfer is a more secure way to receive money.
- **Security:** In some cases incoming ACHs and checks can come back up to 15 days Returned/NSF. Incoming wires are guaranteed funds.

Living our mission to improve the financial lives of our neighbors and their businesses.

12

12

# Reverse Wires

## What is a reverse wire?

A reverse wire is a B2B transaction in which the bank account holder authorizes another party, such as a vendor, to withdraw funds from their account via a wire transfer. It is called a reverse wire because it is initiated by the recipient of the funds, rather than the sender. This is in real time, like a wire, so it will not bounce, whereas an ACH debit or check can bounce.

Reverse wires are also known as draw-down requests, reverse draw-down wires, or reverse-wire requests. The benefit to the funds recipient is that the transfer is secure; the benefit to the payer is that once they have authorized their bank in writing to respond to future draw-down requests, no work is required on the payer's part to execute a transfer.

## Benefits of a Reverse Wire:

Reverse wires are of particular use where the payment is-

- high-risk
- on a recurring basis
- for a variable amount

If the payment is not high risk, ACH is a viable alternative. If the payment is not recurring, a traditional wire is simpler to execute. If the payment is not variable, a repeating traditional wire is most efficient.)

## Setting up a Reverse Wire:

Setting up a reverse wire between you and one of your customers is a two-step process. The first step is of course checking with your bank to see if they are able to handle these draw-down (reverse wire) requests. Not all financial institutions are able, or will perform this service because they are generally very labor intensive, and banks consider them to be high risk. If your bank is able and willing to execute a reverse-wire, draw-down request, then the next step is to have each of your customers you wish to draw down enter into an agreement with their particular bank.

Living our mission to improve the financial lives of our neighbors and their businesses.

13

13

# Real-Time Payments (RTP)

## A New Rail of Payments

Real-time Payments (RTP) combines immediate funds availability, settlement finality, instant confirmation, and integrated information flows—all in a payment made in seconds. Bringing together speed, data, and communication solves for longstanding challenges.

## Business process simplification:

Auto-posting occurs when the right level of data accompanies a transaction for invoice matching. Along with instant payment notification RTP provides flexibility so that all of the data needed to identify a payment and the reasons for exceptions can accompany a payment. Not only does this optimize auto-posting and reconciliation but also helps to minimize payments inquiries. Payees can dedicate fewer resources to receivables posting and reconciliation. This distinguishes RTP from other existing systems.

## Two-way communication:

Existing payment systems allow communication from payer to its bank, and from its bank to the payee's bank. A distinguishing attribute of RTP is the ability for bidirectional communication within the secure system. The value of this includes:

- **Payment confirmation** Payers are notified by the RTP system that funds have reached the payee's bank account. This is useful for urgent payment situations as it closes the information gap for payees awaiting funds and may help to minimize payment status inquiries to call centers.
- **Request for payment** In the future vendors will be able to send a Request for Payment securely within the RTP system. A Pay It Now response will allow payers to choose immediate payment

Living our mission to improve the financial lives of our neighbors and their businesses.

14

14

# Merchant Processing

**Increase revenue:** Just about every consumer has some form of credit or debit card, decreasing the need to carry cash. As customers are more likely to use their credit cards to make large or impulse purchases — or any purchase, for that matter — the ability to accept and process a wide range of major credit and debit cards can help you increase collects.

**Improve cash flow:** With credit and debit cards, authorizations take seconds and funding happens within 1-2 business days. This isn't always the case if you solely invoice your customers and wait to be paid by check. The process could take 30+ days once you consider the time it takes to make the roundtrip through "snail mail" and wait for the check to clear the bank.

**Gain customer satisfaction:** Today's consumers enjoy flexibility. Providing your customers with several options for payment, including checks, cash, credit cards, and debit cards, gives them complete control over how they spend their money.

**Receive online payments:** Taking your business online is crucial, as people rely more and more on the Internet to do their bill payment and account management. A reliable merchant processing service gives you the ability to provide invoicing, receive credit, debit, and eCheck payments online, set up recurring billing, and take your business with you wherever you go.

**Four things to look for when selecting a merchant provider:**

- Chargeback Assistance
- E2E Encryption
- Breach Warranty
- PCI Compliance Assistance

Living our mission to improve the financial lives of our neighbors and their businesses.

15

15

# Interactive Voice Response (IVR)

**Because your staff will never see any of your customers' credit card information you will also be well on your way to PCI Compliance:**

- It's Secure - PCI and HIPAA Compliant
- You can continue using your existing merchant account
- Process Both Credit Card & eCheck/ACH Payments
- Process payments 24/7. Workdays, Evenings and Weekends
- Supports Data Exchange with your systems
- A fraction of the cost of employing staff to handle payments by phone
- Encrypted Interactive Voice Response Technology (CryptoIVR™) designed just for payments, in a PCI Compliant environment

Living our mission to improve the financial lives of our neighbors and their businesses.

16

16



# Improve Cash Flow By Moving from Manual Paper-Based Processes to Electronic

## Manual to Electronic Cash Management Tools

- Electronic Invoicing
- Integrated Receivables
- Bank Administration Institute (BAI)
- Electronic Data Interchange (EDI)
- Straight-Through Processing (STP)

Living our mission to improve the financial lives of our neighbors and their businesses.

17

17

# Electronic Invoicing

## E-Invoicing Can Boost Cash Flow

### E-invoicing vs paper invoicing:

Today's e-invoice is no different than the traditional, paper ones. It includes all the same information - from the customer's invoicing and shipping/service address to details like services performed (or products sold), pricing, quantities, descriptions, invoice number, purchase order numbers, the supplier or salesperson's identifier, and dates. It's all there. Except it's not in physical form. It's online or even cloud-based. And you can reap benefits from an easy-to-use digital invoicing solution.

- Data entry from nearly anywhere
- Significantly improve cash flow
- Besides cash flow, e-invoicing makes associates more productive
- It's also a greener alternative
  - Reduce carbon footprint

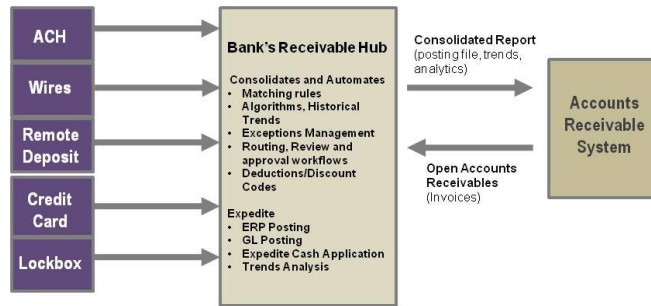


Living our mission to improve the financial lives of our neighbors and their businesses.

18

18

# Integrated Receivables



Living our mission to improve the financial lives of our neighbors and their businesses.

1

19

19

## Bank Administration Institute (BAI)

### Greater Visibility

What's the number-one challenge for Accounting and Reporting teams who aspire to digitize? Hands down, it's data. And the most common misconception about data is that it's an IT issue. It's not. While IT can play a role in addressing some data problems, the usual culprit is the data source itself.

**In Investor Accounting/Reporting, we primarily deal with three different data sources:**

- Servicing system data, our main system of record
- Wire and electronic transfer information (both internal and external)
- Bank statement information

Of those three, bank statements are arguably the most important, since they are the foundation for most processes in Accounting. They are necessary for completing custodial reconciliations, and they're used to reconcile clearing accounts. Bank statements are also the backup for just about every other Investor Accounting function.

Living our mission to improve the financial lives of our neighbors and their businesses.

20

20

# Bank Administration Institute (BAI) Cont.

## Greater Visibility

### Trends in Managing Bank Statement Data

We've seen three major trends in working with bank statement data.

- **PDF Statements:** Some operations still rely on PDF statements to complete their work. Since they come directly from the bank, these PDFs are excellent for audit. However, they offer limited opportunities for automation.
- **"Spreadsheet Statements":** In our experience, this is the most common method for handling bank statement information. To create this data source, someone typically accesses the bank's portal, downloads the information, and puts it into a spreadsheet. This transformation of data might be automated, but often it is manual. Because there is an intermediate step required to generate this spreadsheet, it may present an issue for audit. More importantly, the spreadsheet might not include all the information that is available from the bank.
- **BAI Files:** The third, and often overlooked, trend is to use BAI files. Most modern cash management systems already use BAI files, and they are the banking industry's preferred standard for transferring bank statement information. Since BAI files come directly from the bank, they're great for audit. They're also designed for automation.

### Benefits of BAI Files:

BAI files have been around since 1979. That might not sound so modern, but these files have stuck around for good reason. BAI files offer multiple advantages:

**Greater visibility:** BAI files are available daily, which can help prevent end-of-month surprises. Daily reconciliations can be done without excessive additional effort. BAI files particularly help with certifying daily collections against the bank statement, for example.

**More comprehensive data:** Each transaction in the BAI file bears a three-digit value (its BAI code) that classifies the transaction type. BAI files also include addenda information, also known as a payment message, which can be useful for learning more about a given transaction.

**Extensibility:** With a little cooperation from your financial institution, BAI files can be configured to include additional data as needed. As an example, you could capture the loan number as part of the transaction. Specific requirements play a role here, but there is some flexibility.

**Easy, automation-friendly matching:** Thanks to those transaction codes and addenda, matching transactions is much easier. The codes can even be used to drive reconciliation rules and automate matching. For instance, you can automate the reconciliation of outbound EFT's by using the Customer Reference Number attached to each transaction.

Living our mission to improve the financial lives of our neighbors and their businesses.

21

21

# Electronic Data Interchange (EDI)

- EDI is often mentioned in the context of large and small businesses. It is a system that makes document exchange fast, efficient and accurate. Those who don't employ EDI in their business make people responsible for data entry and transmission. It may lead to numerous mistakes, and therefore, spoiled customer relationship. Read the article to find out what is EDI, and how to make your business benefit from using it.
- Fast processing. Document transactions take minutes instead of days spent on sending postal mail, or hours for writing electronic letters, and filling them with information manually. In addition, the work based this way requires fewer people thus, the staff that might have been busy with manual work can now do more valuable jobs. Real-time tracking, as a function of any EDI software, ensures both coworkers sides that messages are delivered in time.
- No human errors. While gathering business information, filling it in the documents manually, sending them by email, tracking letters, etc. there is a great chance that there will appear mistakes at some point, be it the loss of messages, problems with secure delivery, or simple inattention.
- High accuracy is a solution to the problem described in the previous point. Because each process in EDI is automated, the data is gathered, interpreted, and sent correctly, and always on time.
- Commercial benefit. Needless to say that expenses on paper, printing, storage, and retrieval of documents, filling them, transportations, etc. are drastically reduced by using EDI. It also saves costs usually spent on handling errors, such as lost letters, or rewriting illegible for some reason mails.
- Improved relationships with customers. EDI severely reduces the time gap between ordering a product and receiving it, which leads to more stable working relations between sellers and buyers. Other than that, the absence of errors enhances the level of satisfaction as well.
- Environmental aspects. In the modern world, saving ecology is extremely important, and EDI has its upsides in this area. It allows reducing paper resources by replacing paper letters with electronic faxes, and the level of CO<sub>2</sub>, usually appearing by using petrol-powered transport.



Living our mission to improve the financial lives of our neighbors and their businesses.

22

22

## Straight-Through Processing (STP)

### Key Takeaways:

- Straight-through processing is an automated process done purely through electronic transfers with no manual intervention involved.
- Generally, straight-through processing is most well-known in the areas of payments and securities trading, though it can be implemented in a variety of technical scenarios.
- Computers, mainframes, electronic exchanges, and the internet are all improving the opportunities for STP processing.

STP was a big help for municipalities. It could streamline the accounting process for public entities, particularly in accounts payable and accounts receivable. It helped in the tracking and collection efficiency of money to and from business partners and consumers. It reduced the number of errors involved with accounting functions and improved working capital and cash flow efficiency. It also aided in improved analytics, costly delays or errors by the accounting and reporting teams or the system.

## Improve Cash Flow By Fraud Mitigation

### How to Mitigate Fraud

- Understand the scope of the problem
- Internal education on the types of fraud
- Internal Processes & Procedures
- Treasury Management tools to combat fraud
  - Check Positive Pay
  - ACH Positive Pay
  - Trusteer Rapport
  - Out-of-Band Authentication
  - Know your banker
- Cyber Insurance
- Fraud Mitigation Best Practices
- Internet Security Best Practices

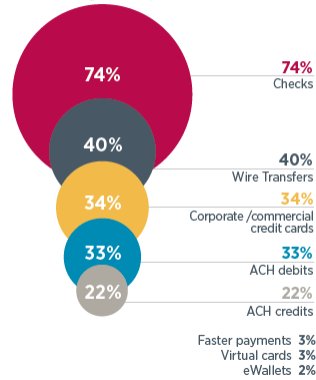
# The Scope of the Problem

## Fraud is prevalent and growing:

- 81% of surveyed companies were targets of fraud
- 74% of fraud attempts were check related
- 75% of surveyed companies experienced Business Email Compromise

Source: 2020 AFP Payments Fraud and Control Survey: [www.afponline.org](http://www.afponline.org)

Payment Methods that Were Targets of Attempted and/or Actual Payments Fraud in 2019  
(Percent of Organizations)



Living our mission to improve the financial lives of our neighbors and their businesses.

25

25

# Internal Education

## Training Payoff:

- Organizations that train their employees on payment fraud, controls, and cyber fraud have a lower
- Frequency of reported losses than their non-trained peers. The lack of employee training on known
- Losses to organizations is seen in the following proportional factors for each category of attack.

Source: 2020 AFP Payments Fraud and Control Survey: [www.afponline.org](http://www.afponline.org)



Living our mission to improve the financial lives of our neighbors and their businesses.

26

26

# Types of Fraud

- Check fraud
- ACH fraud
- Wire fraud
- Business Email Compromise (BEC) & Masquerading
- Voice-phishing/vishing

Living our mission to improve the financial lives of our neighbors and their businesses.

27

27

# Additional Types of Fraud

- Malware
  - Software that is specifically designed to disrupt, damage, or gain unauthorized access to a computer system.
- Spiderware
  - Software program that travels the web locating and indexing websites for search engines.
- Ransomware
  - Ransomware is a form of malware that encrypts a victim's files. The attacker then demands a ransom from the victim to restore access to the data upon payment
- Spyware
  - Spyware can capture information like Web Browsing habits, e-mail messages, usernames and passwords and credit card information. The software can then transmit to another person's computer using the internet

Living our mission to improve the financial lives of our neighbors and their businesses.

28

28

# Check Fraud

## Still persistent in the Digital Age

- Even as legitimate use of paper checks declines, check fraud continues
- Check fraud was 74% of fraudulent activity in 2019
- Digital payments clear quickly, checks can take days- and time is the fraudster's friend
- Today we see counterfeit, forged, washed, altered and duplicate deposit check fraud

Source: 2020 AFP Payments Fraud and Control Survey: [www.afponline.org](http://www.afponline.org)

Advances in technology have reduced the effectiveness of traditional fraud prevention techniques and have even enabled new forms of fraud. For example, in the past, many governments relied upon physical security features embedded in check stock to prevent check fraud. These included watermarks, unique colors, and graphical designs. Advanced duplication technology and remote deposit capture have reduced the effectiveness of these physical measures to prevent fraud.

Source: <https://www.gfoa.org/materials/bank-account-fraud-prevention>

Living our mission to improve the financial lives of our neighbors and their businesses.

29

29

# ACH Fraud

## Social-engineering scams target public entities and others

### Public Sector Entities Get Targeted:

- Municipalities and Colleges become prime targets. Although any business entity could be the target of this type of social engineering attack, public-sector entities seem to be specifically targeted because their contracting information is typically a matter of public record. Fraudsters use information from such public records to more convincingly impersonate legitimate contractors.
- Request appears to be from a valid vendor, asks to update their payment information
  - New routing #
  - Change from ACH to wire
- Always verifying via phone with a known number is a Best Practice

Living our mission to improve the financial lives of our neighbors and their businesses.

30

30

# Wire Fraud

## Targeted phishing and "whaling" emails hit many firms

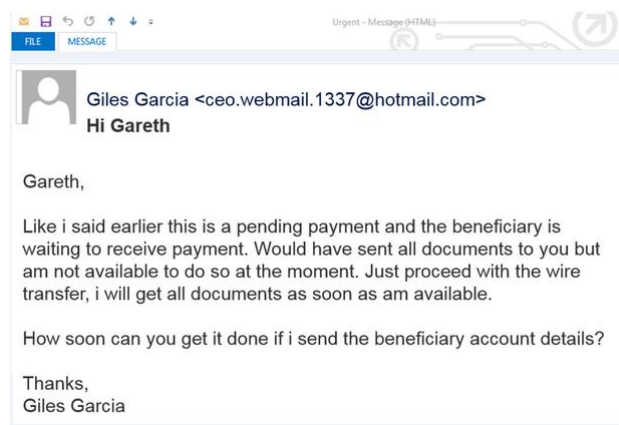
- "Whaling": Scammer impersonates a senior executive such as CFO or Dept Director
- Asks a low-level employee to wire money
- Can also involve asking for W2's, other confidential data
- Phrasing and jargon designed to sound like typical correspondence from staff
- Written by a human, with no links or attachments; and spammers change domains frequently- much harder for a spam filter to detect
- IT security vendors have/ are developing products to fight these scams
- Best Practice: Train employees to be vigilant and ask questions
  - VALIDATE new payment instructions received via email- even internal email
  - PICK up the phone whenever possible and speak directly to the individual allegedly requesting a funds transfer
  - CONTACT outside vendors or clients directly at a known number to confirm any requests for payment method changes
  - REVIEW all payments before they are sent
  - ENSURE all correspondence is validated and documented in a unified way across your business.

Living our mission to improve the financial lives of our neighbors and their businesses.

31

31

## Wire Fraud Example



Living our mission to improve the financial lives of our neighbors and their businesses.

32

32

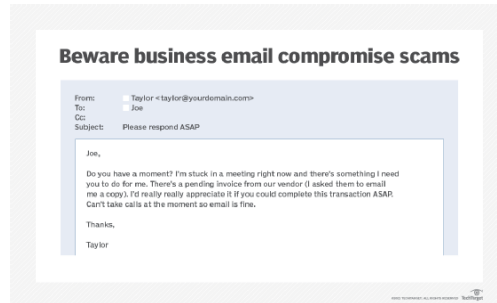


# Business Email Compromise (BEC)

This technique is employed to assume control of a C-level executive's email address to con lower-level employees and/or even banking staff into scheduling fraudulent wires. And while these attacks are waged against a banking institution's commercial customers and municipalities, banking institutions are on high-alert for this emerging scam.

"Email wire fraud is so simple for criminals to pull off, it's cost companies \$26 billion since 2016, says FBI"

Source: <https://www.cnbc.com/2019/09/11/email-wire-fraud-cost-26-billion-since-2016-says-fbi.html>



Living our mission to improve the financial lives of our neighbors and their businesses.

33

33

# Voice Phishing Fraud

## Voice Phishing:

- Scams happen over the phone, voicemail or VoIP (Voice over Internet Protocol) calls. Computer systems can create audio that sounds like a particular person speaking, giving the impression that a trusted individual is making a request.

## Best Practice:

- Don't give out personal information in response to unsolicited phone calls
- Call back vendors at known numbers or the main customer support numbers on their websites

Living our mission to improve the financial lives of our neighbors and their businesses.

34

34

# Phishing Email Example

From: IT Service <clarkbakerfunding@gmail.com>  
 Date: Mon, Jul 25, 2016 at 7:52 AM  
 Subject:  
 To:

Attn: Lehigh University web-mail User,

We noticed that your mailbox has exceeded the allocated storage limit as set by our administrator, you will not be able to send or received email until you upgrade your allocated quota for effective use.

To upgrade your quota now, you need to Copy/click below link to fill the upgrade form.:

<http://admincentre.byethost13.com/form.php>

Failure to do this will have your account inactive.

Lehigh University Support Team.  
 27 Memorial Drive West, Bethlehem, PA 18015 USA · Phone: (610) 758-3000

Copyright ©2016  
 All rights reserved.

\*This can then turns into a Ransomware attack

Source: <https://its.lehigh.edu/phishing/examples>

Living our mission to improve the financial lives of our neighbors and their businesses.

35

35

# Ransomware Fraud

## Ransomware:

- Ransomware is a type of malicious software (malware) that threatens to publish or blocks access to data or a computer system, usually by encrypting it, until the victim pays a ransom fee to the attacker. In many cases, the ransom demand comes with a deadline. Ransomware attacks are all too common these days.
- Examples:
  - Fujifilm Ransomware attack on June 1, 2021
  - Colonial Pipeline attack on May 10, 2021 by large operation that called themselves the "Dark Side"
    - Colonial Pipeline CEO says paying \$4.4 million ransom was "the right thing to do for the country"
    - Colonial chief executive Joseph Blount said he decided early to make the payment after the company was unsure how much of its system was at risk

Source: <https://www.washingtonpost.com/business/2021/05/19/colonial-pipeline-ransom-joseph-blunt/>

- The Justice Department said last month that 2020 was "the worst year to date for ransomware attacks," and experts warn that they are only becoming more frequent.
- On average, ransomware demands exceeded \$100,000 last year and in some cases, were up to tens of millions of dollars, according to the department.

Source: <https://www.cnn.com/2021/05/10/politics>

Living our mission to improve the financial lives of our neighbors and their businesses.

36

36

# Who Are the Criminals?

It's not always who you'd think

- Foreign actors are often blamed for card hacks, ACH/ wire fraud
  - Some nations do play outsized roles: former Soviet bloc, China, etc.
- Much fraud is actually perpetrated domestically
- KPMG: People who commit fraud are typically experienced employees in a position to collude with others inside and outside an organization
  - Usually hold managerial or senior positions
  - No prior history of criminal activity
  - Only 35% face criminal or civil litigation; only 7% do jail time
  - 93% of frauds perpetrated in multiple transactions; 72% over a 1-5 year period

Some of our other findings indicate that a typical fraudster is:

- between the ages of 36 and 55 (69 percent of fraudsters investigated)
- predominantly male (79 percent), with the proportion of women on the rise at 17 percent, up from 13 percent in 2010
- a threat from within (65 percent are employed by the company)
- holds an executive or director level position (35 percent)
- employed in the organization for at least six years (38 percent)
- described as autocratic (18 percent) and are three times as likely to be regarded as friendly as not
- esteemed, describing themselves as well-respected in their organization
- likely to have colluded with others (62 percent of frauds, down just slightly from 70 percent in the 2013 survey)
- motivated by personal gain (60 percent), greed (36 percent) and the sense of 'because I can' (27 percent).

Source: KPMG "Profiles of a Fraudster": <https://home.kpmg/xx/en/home/insights/2016/05/global-profiles-of-the-fraudster.html>

Living our mission to improve the financial lives of our neighbors and their businesses.

37

37

# Who Are the Criminals?

Why is it so easy? Because is cost such a nominal amount of money

Free Web Hosting	Single Shared Hosting	Premium Shared Hosting	Business Shared Hosting
\$0 <sup>00</sup> /mo	\$9.00 <b>Save 93%</b> \$1 <sup>39</sup> /mo	\$40.00 <b>Save 75%</b> \$2 <sup>59</sup> /mo	\$45.00 <b>Save 71%</b> \$3 <sup>99</sup> /mo
✓ 1 Website	✓ 1 Website	✓ Unlimited Number of Websites	✓ Unlimited Number of Websites
✓ 300 MB Disk Space	✓ 30 GB Disk Space	✓ 100 GB Disk Space	✓ 200 GB Disk Space
✓ Limited Bandwidth (3 GB)	✓ Limited Bandwidth (100 GB)	✓ Unlimited Bandwidth	✓ Unlimited Bandwidth
✗ No Email Account	✓ 1 Email Account	✓ Unlimited Email Accounts	✓ Unlimited Email Accounts
✗ 24/7/365 Support	✓ 24/7/365 Support	✓ 24/7/365 Support	✓ 24/7/365 Support
	✗ Free Domain	✓ Free Domain	✓ Free Domain
		✓ Weekly Backups	✓ Daily Backups

Living our mission to improve the financial lives of our neighbors and their businesses.

38

38

# Positive Pay

Securing against different types of fraud with Treasury Management solutions

**Positive Pay:** protects against check fraud

- Checks presented are verified against a file uploaded by user
  - Verifying \$ amount, Payee, Check #
  - Electronic and/or text notification- approve or deny
- If no decision by cutoff time, default to deny the check
- Teller Positive Pay

**Why Positive Pay:**

According to the National Check Fraud Center, fraudulent checks account for more than ten billion dollars of losses every year.

**How can my Organization Implement Positive Pay?**

- Creating and implementing a positive pay system is surprisingly easy. Usually, all you need to do is to contact your bank and inform them of your interest. You'll be supplied with the bank's spec sheet. You'll then work with your ERP system to create a file for the bank to test. From there, the bank takes care of the rest. Fees do apply and should be seen as an additional insurance policy.
- If your organization uses an outsourced payment processing firm, this team may be able to assist in this process. Generally, setting up a positive pay system will take several business days, which means it's important to plan in advance.

Living our mission to improve the financial lives of our neighbors and their businesses.

39

39

# ACH Filtering & Blocks

Also known as ACH Positive Pay

Securing against different types of fraud with Treasury Management solutions

**ACH Blocks:**

- ACH Block for accounts that should NOT have ACH activity
- All attempted ACH debits will be returned to the originating bank

**ACH Filtering:**

- ACH Filter allows you to define who may debit ACH's from your account and for what amounts
  - For example a payroll processor or utility provider
  - You can set limits for your approved vendors
- ACH debits not on approved list will be "suspect" items, you decide to pay/return

**Why ACH Filtering and Blocking:**

- ACH fraud prevention solutions gives you more security as you move toward more efficient electronic payment processing. This is a low cost solution.

**How can my organization implement ACH Filtering and Blocking:**

- Establishing these services is as easy as contacting your vendors who are approved to debit your account to obtain their originator ID(s). Supplying that list to your bank and they will take it from there. Edits can be made and managed through your secure online treasury management banking tools.

Living our mission to improve the financial lives of our neighbors and their businesses.

40

40

# Additional Security Features

## Trusteer Rapport

### Protect client endpoints against malware and phishing:

• IBM Security Trusteer Rapport is an advanced endpoint protection solution designed to protect users from financial malware and phishing attacks. Using industry-leading technology, Trusteer Rapport is designed to defend against MitB attacks, remove malware from endpoint devices and protect customers by preventing them from entering phishing sites. Trusteer Rapport offers a broad security solution that can help your organization reduce costs, enhance your fraud detection and prevention, and help to provide a seamless customer experience.

Source: <https://www.ibm.com/products/phishing-and-malware-protection>

### Key Features:

- Additional layer of security to anti-virus software
- IBM product, free to download
- Protects against malware and phishing attacks
- Verifies the website you're connecting to is genuine not a fake
- Once verified, Trusteer locks down communication between you and the site so your credentials can't be stolen

Living our mission to improve the financial lives of our neighbors and their businesses.

41

41

# Additional Security Features

## Out of Band authentication

- Two-factor authentication requires a second verification method (e.g. not just a password)
- Out-of-band authentication is when the second method is through a separate communication channel (e.g., code to your phone plus ID and password from laptop)
- Even if a fraudster gains access to your laptop, they cannot complete a transaction without also accessing your phone
- Ensures only legitimate users initiate wires, ACH transactions, and internal transfers.

Living our mission to improve the financial lives of our neighbors and their businesses.

42

42

# Know Your Banker

## Regular Relationship Reviews with your Banker

- Do you know who your banker(s) is (are)? You should- and they should know you and your needs.
- It's important to keep close ties with your banker. In good times and in bad, your bank plays a key role in the health and growth of your company. An important thing to know is that you shouldn't simply seek out your banker when you need financing or better rates.
- Your banker should be a trusted advisor who can strategize with you as your environment changes, resources increase and industry evolves.
- Manage and review online banking users and authorized signers internally
- Regularly review limits and authorizations
- Utilize of dual control
- Don't share usernames among multiple employees
- Ask your bank if they offer a sub-user audit feature

Use online banking to monitor your accounts daily but use fraud prevention solutions to keep your money protected.

Living our mission to improve the financial lives of our neighbors and their businesses.

43

43

# Fraud Resources & Information

- Krebs on Security: [www.krebsonsecurity.com](http://www.krebsonsecurity.com)
- Accenture Finance and Risk Blog: [www.financeandriskblog.accenture.com](http://www.financeandriskblog.accenture.com)
- Ohio Protects: [www.ohioprotects.org/learn-about-fraud](http://www.ohioprotects.org/learn-about-fraud)
- 2020 AFP Payments Fraud and Control Survey: [www.afponline.org](http://www.afponline.org)
- FBI: <https://www.fbi.gov/scams-and-safety>
- NACHA Current Fraud Threats Resource Center: <https://www.nacha.org/content/current-fraud-threats-resource-center>
- GFOA: <https://www.gfoa.org/materials/bank-account-fraud-prevention>

The following links can provide more information

- <https://blog.totalprosource.com/5-common-malware-types>
- <https://www.fbi.gov/scams-and-safety/common-scams-and-crimes/spoofing-and-phishing>
- <https://www.csoonline.com/article/3236183/what-is-ransomware-how-it-works-and-how-to-remove-it.html>

Living our mission to improve the financial lives of our neighbors and their businesses.

44

44

# Cyber Fraud Insurance

## What is cyber insurance?

•**Cyber insurance:** also known as cyber-liability insurance – is an insurance policy that helps protect organizations from the fallout from cyberattacks and hacking threats. Having a cyber insurance policy can help minimize business disruption during a cyber incident and its aftermath, as well as potentially covering the financial cost of some elements of dealing with the attack and recovering from it.

“Most cyber-attacks can be offset by a range of insurance products. But in this type of scheme, the money, once wired, is not typically covered by the sending bank, there are few insurance options to recover it and there is little law enforcement can do to claw it back. It's gone.”

Source: <https://www.cnbc.com/2019/09/11/email-wire-fraud-cost-26-billion-since-2016-says-fbi.html>

Don't let the 79% recovery rate lull you into a false sense of security,” says Levin. “The loss of time, worker focus and business opportunities can be catastrophic is the aftermath of an attack, and is yet another reason no company should be without a robust cyber insurance policy in place.”

Source: <https://cyberscout.com/en/blog/business-email-compromises-bec-cost-companies-an-average-of-75000-heres-what-you-should-know>

Living our mission to improve the financial lives of our neighbors and their businesses.

45

45

# Fraud Mitigation Best Practices

The FBI and IC3 released a checklist for organizations to follow in the event of a BEC:  
Contact the originating financial institution once fraud is identified.

- Filed a detailed complete with IC3.
- Follow up regularly on the IC3 website for announcements regarding BEC trends.
- Verify any payment charges with intended recipients.
- Continue to file reports with law enforcement.

Source: <https://cyberscout.com/en/blog/business-email-compromises-bec-cost-companies-an-average-of-75000-heres-what-you-should-know>

## General Banking:

- Review your bank accounts daily to identify any unusual or unknown transactions.
- Use Positive Pay on all accounts with check writing and issuance privileges.
- Use ACH Blocks and Filters to monitor transactions and block or restrict debit activity.
- Eliminate paper and access bank account information and statements online.
- Separate bank account reconciliation and reporting functions from payment initiation and management.
- Ensure corporate resolutions, authorized signatures, and other banking agreements are current.

## General Workplace

- Keep all IDs, passwords, security codes and cards safe and secure, and do not allow employees to share them.
- Store financial information in a secure area with restricted access and dispose of unused and outdated documents properly.
- Establish a company security policy for all areas including computers and physical building security.
- Implement a third party or independent review and audit systems
- Know your customers, vendors and business partners, and have contracts and controls in place.
- Know your employees; perform background checks; and always verify employee access to information.

Living our mission to improve the financial lives of our neighbors and their businesses.

46

46

# Internet Security Best Practices

- Educate your employees on your corporate security policy.
- Be continuously vigilant for social engineering attempts at fraud.
- Make sure your desktop anti-virus/malware software is current, and is configured to receive signature updates frequently and automatically.
- Configure your desktop anti-virus/malware software to continuously scan automatically in the background (real-time scanning).
- Configure your desktop anti-virus/malware software to run frequent full scans on all disk drives.
- In case of infection, see your anti-virus vendor for instructions.
- Install application and operating system patches regularly.
- Practice security in layers by using:
  - Anti-virus/malware/spam software at the desktop.
  - Anti-virus/malware software at the server.
  - Anti-virus/malware/spam software for email.
  - Anti-virus/malware/web filtering software for internet access.

Living our mission to improve the financial lives of our neighbors and their businesses.

47

47

# Bankers Understand Why Improved Cash Flow Matters

**The challenges facing the public sector are enormous:**

- Soaring demand for services & improvements
- Rising demographic pressures
- The increasing cost of security
- Ageing infrastructure
- Prevent reputation harm to your municipality

Living our mission to improve the financial lives of our neighbors and their businesses.

48

48



# Improve Cash Flow with Efficiencies & Combating Fraud

- Cash flow is a significant indicator of a company's overall health and operations. Inefficiencies and fraud can decrease cash flow. Do a quick search for "fraud losses" and you'll find plenty of reasons to worry about the risk of fraud for your organization.
- According to the Association of Certified Fraud Examiners' (ACFE) "2014 Global Fraud Study," the typical organization loses 5% of revenue each year to fraud. Even more alarming is the fact that the smallest organizations tend to suffer extremely large losses due to occupational fraud.
- And don't think your company is somehow exempt—it can happen in pretty much any company, for-profit, non-profit, governmental, etc. and it's not something that's typically discovered overnight. The ACFE reports the median duration of fraud, from the time it begins until it's discovered, is about 18 months. But some fraud can go on for years in a organization. Stories of fraud, like the ones on the next slide, can be a wake-up call.
- Automation such a integrated receivables, integrated payables, lockbox processing, dual control ACH and Wires transfer all enforce checks and balances. More automation decreases internal errors and internal/external fraud attempts.

Living our mission to improve the financial lives of our neighbors and their businesses.

49

49

## Improve Cash Flow with Efficiencies & Combating Fraud

### **A former 20 year finance director for the Northern Kentucky Convention and Visitors Bureau pleaded guilty**

Tuesday on three charges related to sending stolen funds to unauthorized individuals, prosecutors confirmed.

A uniform citation accuses Johnson of sending online checks for \$3,840,500 to several people who said they were vendors of the bureau. Police believe the crime took place from May 2017 until September 2018.

Source: <https://www.fox19.com/2019/11/12/former-nky-visitors-bureau-official-pleads-guilty-charges-related-stolen-funds/>  
<https://www.fox19.com/2018/11/17/nky-visitors-bureau-official-charged-with-theft-accused-sending-m-vendor-checks/>

### **Former Halton public works manager charged with fraud**

April 13, 2017 — Nicole O'Reilly, Hamilton Spectator

Halton Region's former public works manager, his wife and a Hamilton contractor are facing fraud charges over an alleged scheme that police say included laundering money through municipal contracts.

The \$770,000 fraud began in 2008 and included falsely billing the region through contracts to Hamilton-based Sirron Systems Inc.,

Halton police allege. The company administers software that monitors and runs water plants.

Det. Sgt. Chris Lawson called it a "rather elaborate scheme," that involved billings sent to the region for supplies or labor that were fake.

Source: <https://www.thespec.com/news/hamilton-region/2017/04/13/former-halton-public-works-manager-charged-with-fraud.html>

### **How the Largest Municipal Fraud in U.S. History was Committed**

October 23, 2014 — Nancy Mathieson\*, WP Original

So, maybe you live in a city like Dixon, Illinois, population 16,000 where everyone knows everyone, people are polite, work hard, and they don't ask their neighbors too many questions.

In 2012, the mayor, everyone else in the city and the national media discovered that Rita Crundwell, the city's Treasurer and Controller had embezzled \$53.7 million from the city over the past 20 years. How could the treasurer of an Illinois town with an annual budget of \$6 million to \$8 million steals over \$50 million in two decades? Here is the toolkit for municipal fraud, as described by attorney Devon C. Bruce, who litigated the Dixon civil case and obtained the largest municipal settlement of its kind, \$47 million.

Source: <http://wirepoints.org/how-the-largest-municipal-fraud-in-u-s-history-was-committed-in-illinois-wp-original/>

Living our mission to improve the financial lives of our neighbors and their businesses.

50

50

## Bidding Banking Services: RFP Process

- Introduction
- RFP Process 5 Step Approach
  1. Internally Compile Requirements
  2. Create the RFP
  3. Shortlist and Solicit Vendors
  4. Evaluate Responses
  5. Conduct Post Evaluation
- Banking Solutions: The world of payments is ever-growing

Living our mission to improve the financial lives of our neighbors and their businesses.

51

51

## RFP Process Introduction

For municipalities and non-profits, RFPs help ensure transparency and allows the public to be accountable for project goals and vendor choices. Conducting an RFP also forces organizations to create a point of reference they can use later to measure their growth or improvement objectives.

- **Where do you start:--Start with what you have today**
  - Evaluate your current situation
  - Internally build the framework for your objectives
  - Set short-term & long-term goals
- **Helpful Information:--Current reports and structure**
  - Analysis statements
  - Merchant Statements (if you're using credit card processing)
  - Account Flowchart
  - Brief description of each account and its purpose
  - Objective for each account

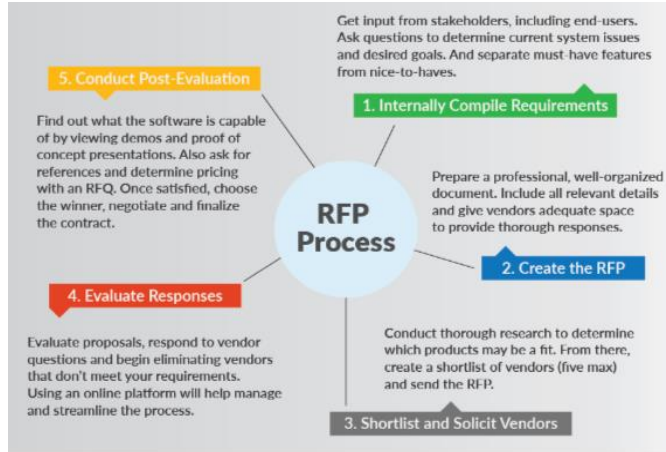
Living our mission to improve the financial lives of our neighbors and their businesses.

52

52

## RFP Process 5 Step Approach

Selecting the best banking relationship can make a difference in day-to-day treasury operations. A Request for Proposal (RFP) has been the method to confidently and objectively select a banking partner.



Living our mission to improve the financial lives of our neighbors and their businesses.

53

53

## Step 1: Internally Compile Requirements

### Step 1: Internally Compile Requirements:

- Get input from other stakeholders, including end-users. Ask questions to determine current system issues and desired goals. Separate Must-Have features from Nice-to-Haves.
- Document the current environment- "where are we now?"
- Ask your banks for an Account Analysis statement for each account and document;
  - What services you currently use
  - What are your volumes
  - How do you pay
  - How does the money move
  - What is the current account structure
  - Could you eliminate or consolidate any accounts
- Design a checklist determining necessary information to gather from each internal department and the services they may require
  - Capture a brief description of how the department is using that service
- Identify areas of improvement through use of technology
  - List all department "Pain Points" & ask for a recommended solution

Living our mission to improve the financial lives of our neighbors and their businesses.

54

54

## Step 2: Create the RFP

### Step 2: Create the RFP:

- Prepare a professional, well-organized document based on your finding. Include all relevant details and give vendors adequate space to provide thorough responses.
- Identify minimum qualifications:
  - Clearly disclose bid term and if any extensions will be requested
  - Location(s) drop-off in your area
  - Specific date and time due by
  - Number of copies ( Should an e-copy be provided)
  - If the bank should be present for the bid opening
  - Collateralization of your deposits
  - Any special contracts and provisions
  - Should there be a local branch located in the market
  - If using services, such as Lockbox, do you require an in-state LBX P.O. Box
- Provide clear and concise instructions
- Disclose deadline of the RFQ if applicable
- Develop an "easy" format
- Eliminate repetitive information requests throughout the RFP, unless it will be split between departments for review
- Provide services requested and volume estimates
- Outline the account structure
- Request copies of the bidders addendums, reports, contracts, etc.
- Identify evaluation factors clearly and provide criteria weight if applicable
- Make an electronic copy of the RFP available in MS Word / Excel (pricing pages –do not "protect" cells as it prevents entities to define their terminology or pricing)

Living our mission to improve the financial lives of our neighbors and their businesses.

55

55

## Step 3: Shortlist and Solicit Vendors

### Step 3: Shortlist and Solicit Vendors:

- Conduct thorough research to determine which products may be a fit. From there create a shortlist of vendors- Recommended 5- and send RFP
- Post a copy of the RFP on your website
- If a RFQ is offered post all questions and the answers to the questions on your website
- Request that all vendors notify you of their intent to bid by a specified date
- Provide an internal contact

Living our mission to improve the financial lives of our neighbors and their businesses.

56

56

## Step 4: Evaluate Responses

### Step 4: Evaluate Responses:

- Evaluate proposals, respond to vendor questions and begin eliminating vendors that don't meet your requirements. Using an online platform will help manage and streamline the process.

#### Evaluate responses in terms of:

- Day-to-day capabilities
- Relationship Team Experience
- Financial strength of the Institution
- Quality of Proposal
- Creativity or new approaches
- Evaluate Fees and Earnings

Tip: Be open minded to new ideas on how to automate your banking and protect your school district from fraud.

#### Banks Welcome the Opportunity to Present Solutions in Person:

- An oral presentation provides the opportunity to discuss the services offered and to demonstrate electronic solutions
- Oral presentations provide a better understanding of the solutions offered and better equip you to make the right choice
- An oral presentation provides the opportunity to discuss the services offered and to demonstrate electronic solutions
- For an effective evaluation, you should:
  - Select only finalists for oral presentations
  - Set a time limit for each finalist's presentation
  - Ask hard questions

Living our mission to improve the financial lives of our neighbors and their businesses.

57

57

## Step 5: Conduct Post Evaluation

### Step 5: Conduct Post Evaluate:

- Find out what the software and online systems are capable of by reviewing demos and proof of concept presentations. Also ask for references and determine pricing with an RFQ. Once satisfied, choose the winner, negotiate and finalize the contract.

#### Endorse your decision with positive answers to these questions:

- Can this bank meet all of our current and future needs?
- Does this bank offer the best value for the products and services provided?
- Does this bank have the resources to provide innovative solutions?
- Will this bank provide the best customer service to support our needs?

Tip: Notify all bidders of the RFP outcome

–Provide evaluation results including pricing, interest rate, and any other factors that influenced your decision

#### Develop overall implementation plan which includes:

- Key project tasks and dependencies
- Staffing and skill set requirements
- Timeframes
- Key deliverables

Living our mission to improve the financial lives of our neighbors and their businesses.

58

58

## Banking Solutions

### Banking Solutions to consider that you might not be using:

- Same-Day ACH
  - A third window was opened in 2021
- Real-Time Payments
  - A new rail of payments
- Integrated AP/AR
  - Through a secure web-portal you can outsource your payments with various payment types
  - Posting incoming AR has never been so easy. With Integrated AR you are offered a controlled environment for your payments to come in and the bank will deliver you a posting file
- Controlled Disbursements
  - Know your funding totals early with early daily notification of the dollar amount of checks that will clear against your account
- Account Reconciliation
  - You can request a variety of optional reports including paid checks, stop payments, and several others in various output formats. Customers use the statement or optional reports to reconcile their statement and identify any exceptions

Living our mission to improve the financial lives of our neighbors and their businesses.

59

59

## Closing Thoughts

- Select a bank based on value, capabilities and commitment to customer service
- The right banking partner will deliver solutions based on your current needs and provide on-going recommendations as your environment changes
- Conduct a Day-to-Day process review with your new banker

Living our mission to improve the financial lives of our neighbors and their businesses.

60

60

It was a pleasure to be here with  
you today.

Thank you to OAPT

Krystle M. Kite  
SVP/ Treasury Management  
[www.linkedin.com/in/Krystle-Kite-TreasuryManagementConsultant](https://www.linkedin.com/in/Krystle-Kite-TreasuryManagementConsultant)

FIRST COMMONWEALTH BANK  
[www.fcbanking.com](http://www.fcbanking.com)

Living our mission to improve the financial lives of our neighbors and their businesses.

61

61



62