



Business Payments Coalition

## Vendor Forum Meeting Recap August 13, 2019 at the CRF Forum and Expo

The BPC's Vendor Forum held an in-person meeting on August 13, 2019 at the Credit Research Foundation (CRF) Forum and Expo in Seattle, WA.

### Using Artificial Intelligence, Machine Learning and Robotic Process Automation in Accounts Receivable

CRF did a survey of their members on the impact and influence of robotics process automation (RPA), machine learning (ML) and artificial intelligence (AI) in accounts receivable (AR) and credit to get insight into how AR and credit professionals are using the technology and the results achieved. See slides 3 – 8 in the deck at the end of this recap. The respondents found the technology beneficial and hope that the technology will advance for future uses.

Attendees had comments and observations:

#### RPA, ML and AI Technology

- Corporates want straight through processing (STP) in cash application, and are looking for technologies to solve that.
- Sometimes, automation is being mislabeled as RPA. Some ERPs are advertising their systems as AI.
- Many providers have this technology, so it is not a differentiator any more. Providers will make the investment because it is table stakes. Many corporates that use third party providers have the technology.
- AI has to have data points. If data points aren't available, they need to be built up over time to get the desired results.

#### Risk Aversion and Compliance

- Corporates are risk averse.
- Having intelligent decisions made by code is scary. What can go wrong?
- What do vendors do for security and compliance?
- Does the technology comply with SOX? Nobody wants to go to jail.
- Compliance is necessary, but being too risk adverse stifles innovation.
- Need to educate people about the technology and risk.
- Need to consider business user controls vs. IT controls.



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Recap of Vendor Forum meeting, August 13, 2019

### Adoption and Complexity

- It is challenging for companies to make changes. Corporates don't want to be the guinea pig, they want to be followers.
- Take baby steps; confidence level will grow over time if corporates see it working. The technology requires cultural change.
- Refining processes and adding ML and AI can be good, but it needs to be better than existing “bubble gum and band aids.”
- Complexity and cost of implementation depends on the vendor. Simpler is easier.
- Complexity also depends on the business. It is impacted by
  - the number of systems and payment channels
  - the degree of automating cash application
  - the overall sophistication level of the company
- RPA can be more successful with senior management support and business involvement.
- Companies should embrace the technology that third parties have developed, why build it yourself?
- Education and awareness are needed to increase adoption— how much does it cost, what is the impact on IT, how does it affect staff?
- The business defines the problem, IT implements the technology. Sometimes getting IT support for the technology and implementation is difficult.

## Remittance Information Content

Many AR cash application solutions focus on remittance delivery (e.g., email) and format (e.g., pdf or free form text). What about the data content in the remittance information sent? See slides 9 – 12.

There are two aspects of data content:

1. Which data elements are included, e.g., invoice number, AR account number
2. How the data is identified in the remittance, e.g., an invoice number, a discount taken

Remittance standards (e.g., ISO 20022 REMT message and X12 EDI 820) give data definitions and syntax but don't tell what data to include.

Discussion questions: How much of a problem do clients have in getting the right information? Should the industry spend any time developing standards for data content in remittance data?

Attendee comments and observations:

- We've been talking about remittance difficulties for a number of years. Can providers help?
- If there were standards, the industry needs to consider how to get adoption and who polices them. Individual providers can't do it, but can the industry get together to do it? One approach is a global strategic attack on the problem. Most other countries have not been successful in solving remittance challenges.
- An influential business group needs to drive this. One economic driver is the current inefficiency. To automate, do you fix it on the front end (sending) or the back end (receiving)?



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- There needs to be incentive for AR software providers to develop their product to include the standards. Implementation depends on the sophistication of the provider. It can be a differentiator. Currently, due to unique requirements and complexity of EDI standards, companies have EDI 820 specialists to interpret information received.
- Corporates are more concerned with internal data problems than getting external data. They are concerned about getting access to data, knowing how to use it, and making it actionable. It is hard to get interest in standards when corporates are more concerned about internal data.
- Start with a premise that there won't be standards, as there is a low likelihood of it happening.

## E-Invoicing

The BPC e-invoicing E-delivery Network Technical and Semantic Model work groups are finalizing their assessment reports, which are expected to be published by year end. Refer to slides 13 – 16 for details on next steps.

**Save the date and plan travel to attend in-person meeting of the BPC  
during the AFP Annual Conference in Boston**

**Sunday, October 20**

**11:30 a.m. to 1 p.m.**

Room 208 at the conference location

Details at <https://businesspaymentscoalition.org/events>

RSVP to [business.payments.smb@mpls.frb.org](mailto:business.payments.smb@mpls.frb.org) by October 7

Guests and colleagues welcome



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# Vendor Forum Meeting

At the CRF Forum and Expo, Seattle  
August 13, 2019



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Vendor Forum  
Meeting  
August 13, 2019

# Agenda



Using AI, ML and RPA in  
Accounts Receivable

01

Remittance  
Information Content

02

Update on e-Invoicing

03



# Using Artificial Intelligence, Machine Learning and Robotic Process Automation in Accounts Receivable



# CRF Survey on AI, ML and RPA

- 2019 survey of CRF professionals on the impact and influence of RPA, ML and AI
- Insight into how AR and credit professionals are using the technology and the results achieved

**Robotic Process Automation (RPA)** – Use of technology to automate rule-based processes (mimics human actions)

**Artificial Intelligence (AI)** – Use of technology to simulate human intellectual tasks such as cognitive thinking and communication (mimics human intelligence)

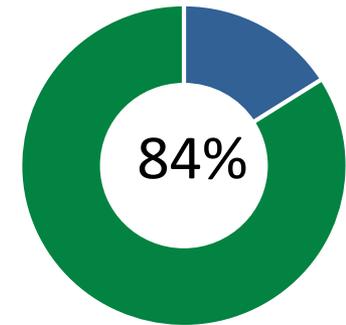
**Machine Learning (ML)** – An application of artificial intelligence in which systems automatically learn and improve from experience without being explicitly programmed



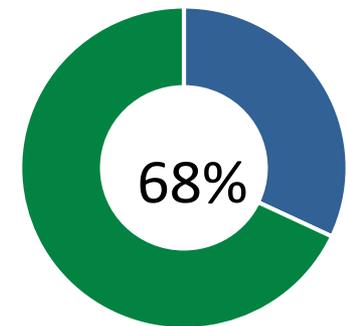
# 2019 CRF Survey of AR and Credit Professionals

## Takeaways

- All three technologies can help with process efficiency through greater automation
- Technology is new and not widely adopted
- Primary drivers for adoption are cost and time savings
- The majority of companies using the technology achieved success in less than one year



Achieved cost savings or other benefits

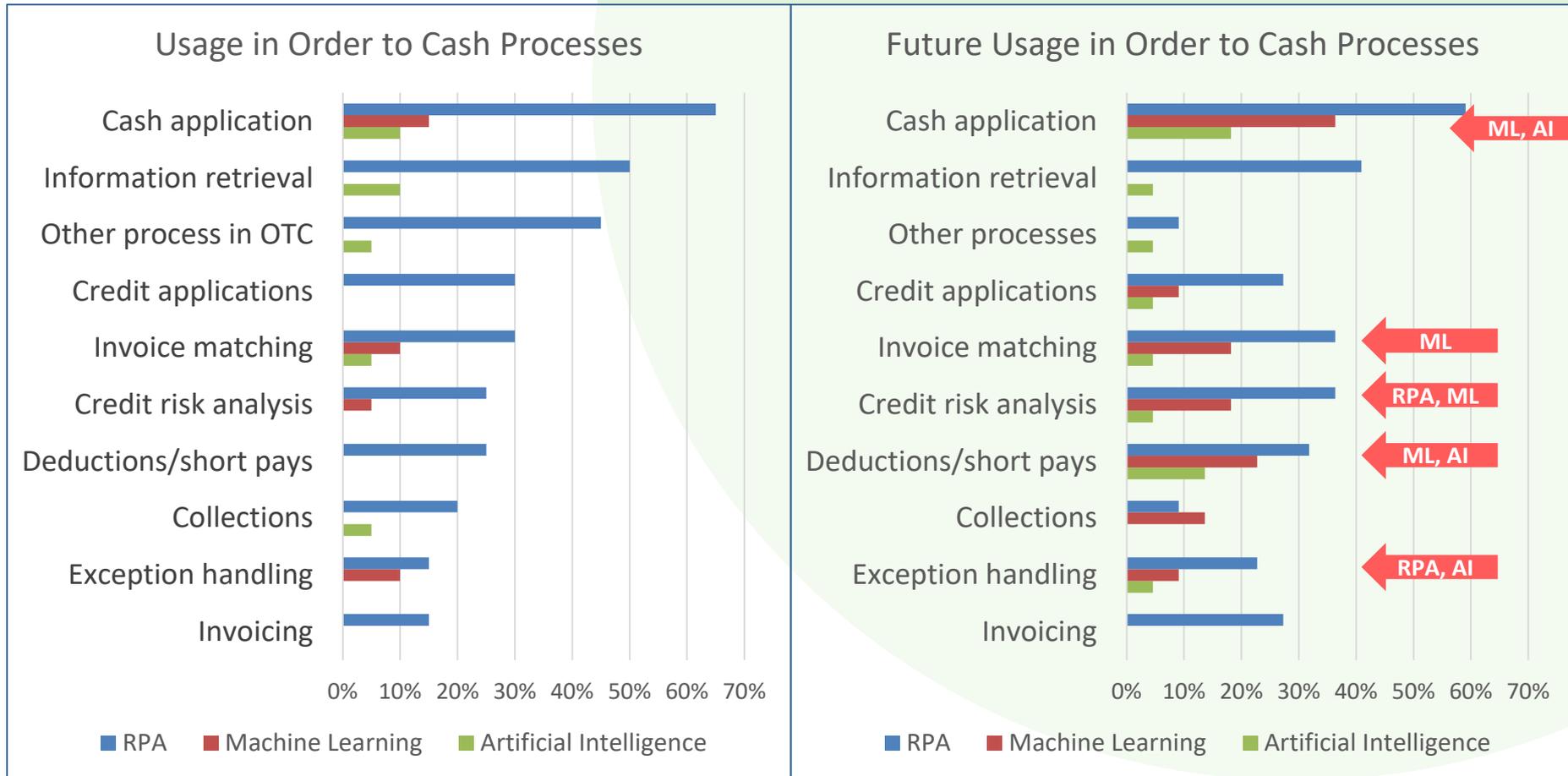


Achieved desired results



# Usage in Order to Cash Processes

## Current and Planned Future Uses



# Usage in Order to Cash Processes

## What companies are using RPA, ML or AI for

- RPA - routine and repetitive tasks
  - Almost half of those using RPA did additional implementations
- ML - processes that benefit from learning from prior results
- AI - still in infancy

### Other sources mention potential RPA uses

- Validating order data
- Sending invoices
- Credit monitoring

## What companies plan to use RPA, ML or AI for in the future

- Use of ML and AI will increase
- High hopes for ML and AI to be useful for processes that require human thought and intervention today
  - Cash application
  - Credit risk analysis
  - Invoice matching
  - Deductions/short pays
  - Collections



# RPA, ML and AI in Accounts Receivable

## Discussion Topics

### Discussion

- What is your view of these technologies in the AR function?
- What will it take for broader adoption of the technologies?
- Is it likely that ML and AI will evolve to meet the functionality that corporates want in the future? What is the greatest challenge for the technologies to bring the desired functionality to market?
- Would structured remittance data help with these solutions in AR?
- How much effort is required by providers to develop solutions?
- How complex are the technologies to implement by end users? What resources are required?
- How will RPA, ML and AI figure into AR solution provider roadmaps?



# Remittance Information Content



# Remittance Information Content

Many AR cash application solutions focus on remittance delivery (e.g., email) and format (e.g., pdf or free form text)

## **What about the data content in the remittance information sent?**

Two aspects of data content:

1. Which data elements are included, e.g., invoice number, AR account number
2. How the data is identified in the remittance, e.g., an invoice number, a discount taken



# Remittance Information Content Standards and Guidelines

Remittance standards (e.g., ISO 20022 REMT message and X12 EDI 820) give data definitions and syntax but don't tell what data to include

## **STP 820 standard – limits data content for simplicity**

- Customer Account Number
- Customer Name
- Invoice Number
- Invoice Date
- Invoice Gross Amount
- Amount Paid
- PO Number
- Discount Amount
- Adjustment Amount
- Adjustment Reason Code

## **EDI X12 820 standard – robust to serve complex needs**

- Data in the STP 820
- Many more options for reference fields with numerous code lists to identify data included
- Code lists can be standard or proprietary

## **BPC simple remittance content guidelines**

- Account number
- Invoice number
- Amount paid
- Invoice date



# Remittance Content Discussion Topics

## What data is included

1. The most common information needed is a full invoice number.
  - Is it common to need more than an invoice number?
  - Outside of industry verticals, how common is it to need different data?
2. Can identification of core remittance data elements solve the data content problem for general businesses (i.e. 80/20 rule)?
  - Outside of specific agreements between trading partners
3. Should standards or guidelines for core data to be included be developed? What effort would it take?

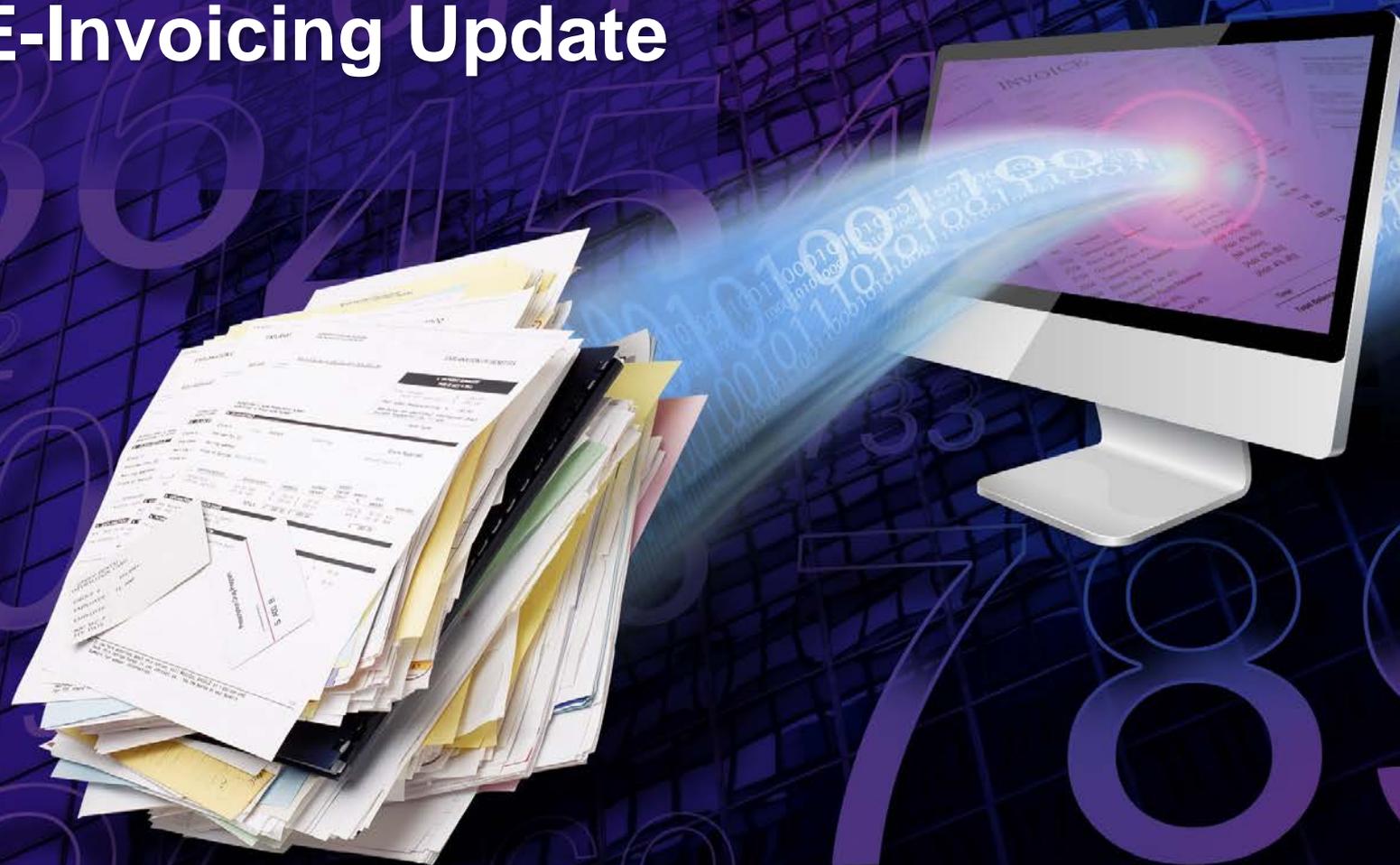
## How the data is identified

1. How much difficulty do businesses have identifying what data is included? Is the data interpreted the same on both sides?
2. Should standards or guidelines for data identifiers be developed? What effort would it take?

**How are clients solving their data content issues?  
Can providers help? How?**



# E-Invoicing Update



# Progress to-date

## Nearing completion of semantic model and e-delivery assessments

Activities	
<b>Phase 1: Market Analysis</b>	
Evaluation of the current state of the market for U.S. invoicing and analysis of the challenges and opportunities presented by e-invoicing	<b>Preliminary Situation Analysis</b>
	<b>Market Solutions Analysis</b>
	<b>Preliminary Framework Assessment</b>
<b>Phase 2: Solution Assessment</b>	
Assessment of existing interoperability frameworks to determine the feasibility of leveraging established principles to support a U.S. Interoperability Framework	<b>e-Delivery Network Technical Feasibility Assessment</b>
	<b>Semantic Model Gap Assessment</b>
	<b>Governance Framework Assessment</b>

### International Market Impact

- The Technical Feasibility Assessment report recommendations are being adopted to support a global interoperability framework
- The Semantic Model U.S. Gap Assessment key findings are being adopted by existing e-invoicing interoperability frameworks



# Steps to Finalize the U.S. Framework

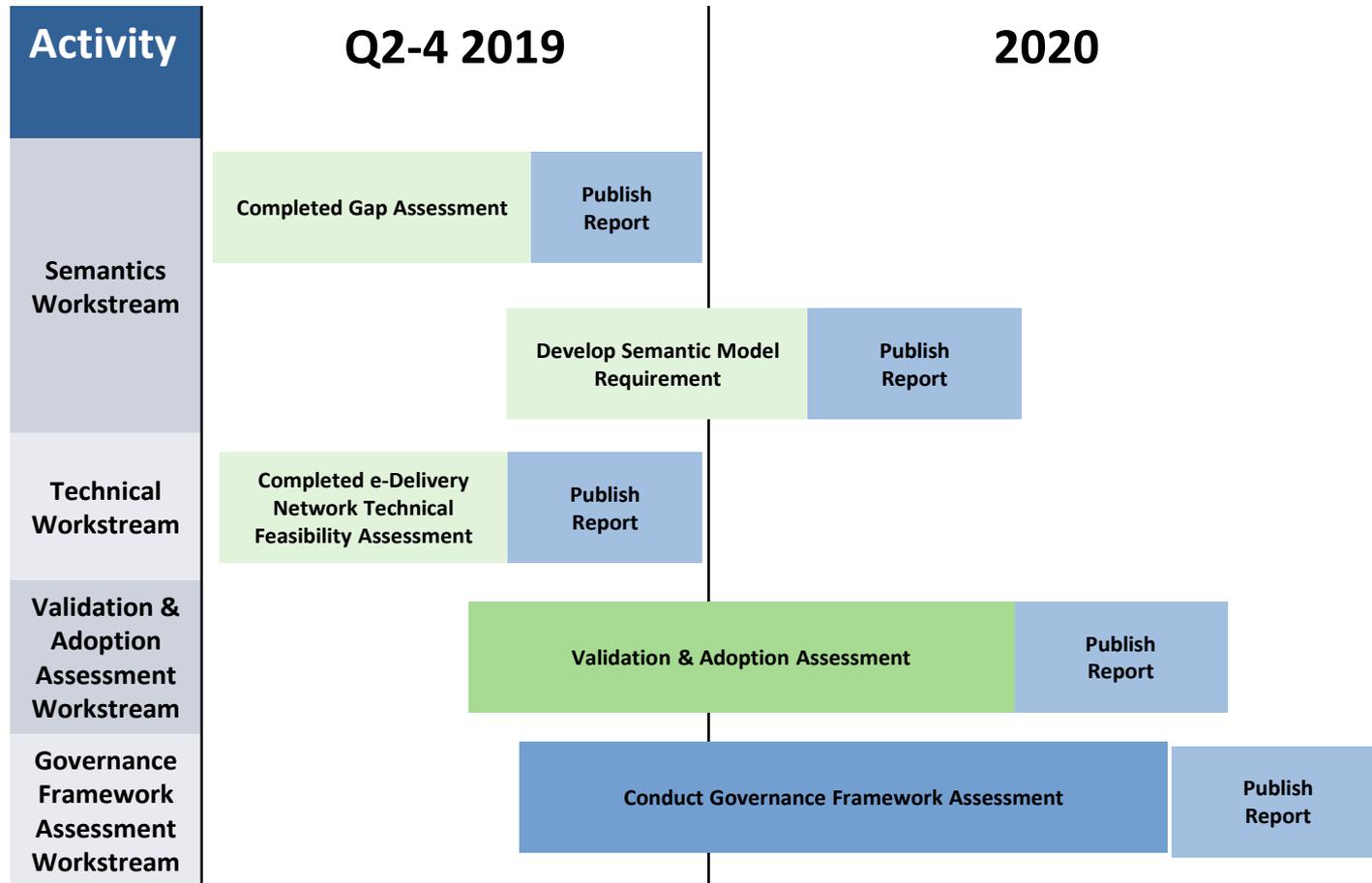
## 2019 - 2022 Planned Work Groups:

1. Complete the semantic model
  - Target completion at the mid - 2020
2. Create an e-delivery network validation system
  - Target completion at the end of 2020
3. Lead a BPC, or broader, governance assessment work group
  - Target completion at the end of 2020
4. Work with industry to identify a governance body by end of 2021



# Steps to Finalize the U.S. Framework

## 2019-2020 e-Invoice Interoperability Framework Roadmap





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<https://businesspaymentscoalition.org/>  
email: [business.payments.smb@mpls.frb.org](mailto:business.payments.smb@mpls.frb.org)

# Remittance Information Content

## Content Challenges

1. A payer's AP system field for invoice number or other identifier may be too short for complete information. Even when full identifiers are supported, data may be truncated in the remittance.
2. A payer may not input information into the AP system that the payee needs, such as a complete unique invoice number or adequate level of detail.
3. The AP system may not be configured to send the correct data in the remittance, or the data may be misidentified.
  - A purchase, sales or service identifier may be sent instead of an invoice number
  - A purchase order may be tagged as an invoice number
4. The AP system may not send complete information, e.g., if multiple invoices are being paid.
5. Identifier data may include extraneous characters, e.g., alphanumeric characters in a numeric field.
6. There is wide variability in codes used for deductions, discounts and short pays.
7. A payee's automated capture method for remittance information, e.g., OCR, may capture incorrect or incomplete information.

