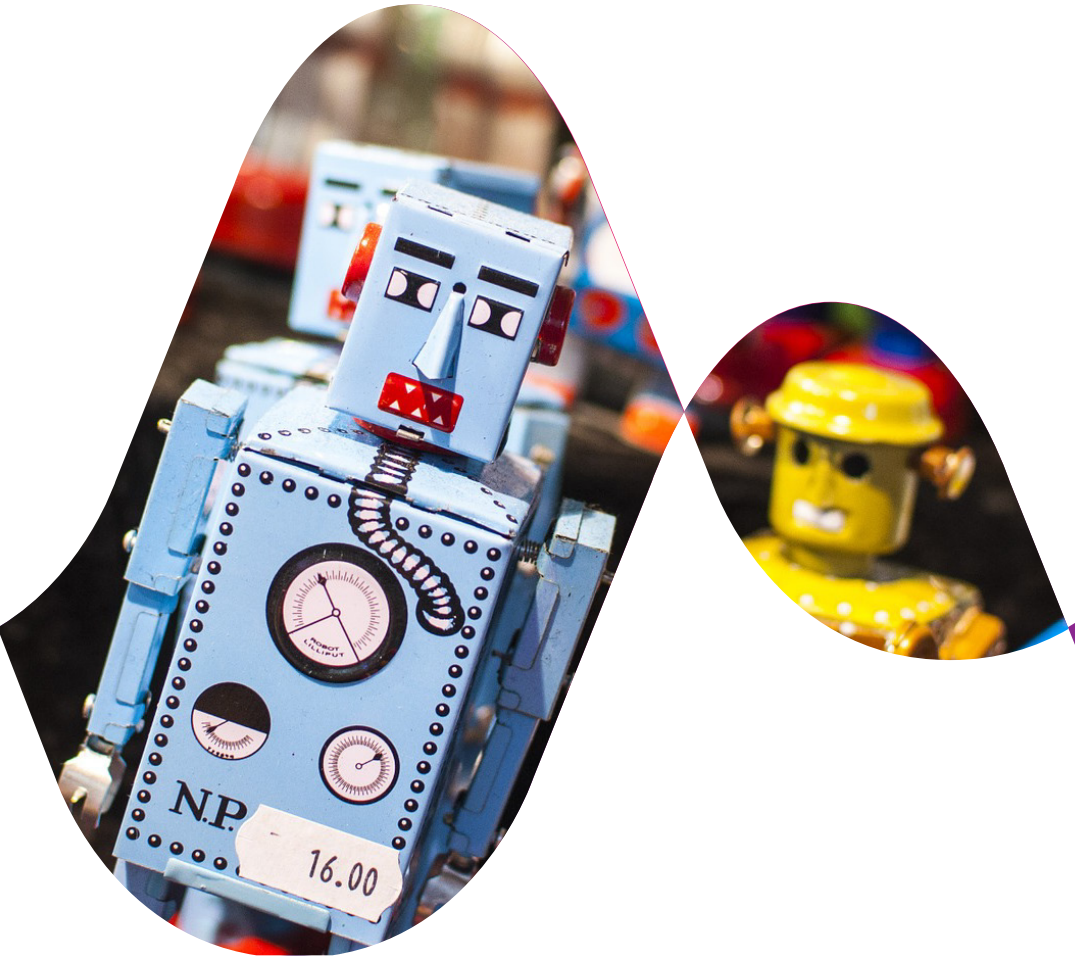
WorkFlowWise

Robotic Accounting

Accounting in the 21st century



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Robotic Accounting
Not a hype, but reality

A recent study by PwC estimated that over 30% of the jobs in the US, UK, and Germany are susceptible to automation by the early 2030s. This is not different in the financial sector, where we've seen robotic accounting become more and more adopted thanks to an influx of technological possibilities and company readiness.

The rise of robotic accounting is especially influenced by the internet and cloud computing. A few examples of today's reality:

- Robot accountants give booking advice to people.
- Invoices are booked without human intervention.
- Companies even share their financial records.

Automation has a long history, much longer then you would expect in fact. In the 3rd century B.C., Chinese philosophers already hypothesized mechanical aids. The first robotics was even functional during the late Middle Ages, but the real revolution is happening now.

Robotics is about to become intelligent.

Read about the varying proficiencies of robotic accounting. Find out what's possible and what steps your organization can take to become a true robotic accounting powerhouse.

If you have any questions after reading this white paper, don't hesitate to contact me or my colleagues here at WorkFlowWise.

Looking forward to your thoughts!

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1. What is Robotic Accounting?

In short, robotic accounting ensures that invoices are posted to the accounting system without human intervention and without errors.

The robot replaces an increasing amount of activities normally done by humans. The purpose of robotic accounting is a posted invoice without the help of a human accounts payable clerk. This has three advantages:

- You need less people for the same amount of work;
- A robot makes no mistakes;
- There is more time for analysis.

That's all good, but how does this benefit you as a Financial? Simple. In addition to less repetitive work, there is more time for controlling and reporting, which results in a higher added value for the business. You become a true partner to the business.

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2. The 4 proficiencies of Robotic Accounting

Robotic accounting is very much on the rise. 100% touchless accounting is not something we often see in practice. And yet, the first signs of a fully automated process are visible in varying degrees.

The maturity of robotic accounting can be divided in four proficiencies, from least to most mature:

1. Data reading from the invoice
2. Receive and process invoices as data (e-invoices)
3. Automatic invoice matching and booking
4. Automatic invoice processing on the basis of crowd accounting

2.1. Data reading from the invoice

The first proficiency of robotic accounting is reading data from a regular invoice with optical character recognition (OCR): a technique that recognizes characters of a scanned or PDF document and transfers this to data.

The technique was first invented in 1914 to aid the blind and visually impaired by producing a specific tone unique to each character. It was ground-breaking, but very slow. Further development and over a hundred years later helped OCR become much faster and smarter.

The OCR software scans the header and line of data of (scanned) PDF invoices. The invoice data is then entered into the system where the invoice must be posted. The advantage is that certain information can be read off and entered by the computer – The first step of robotic accounting.

The reality with OCR is that much manual work is still involved. The basic assistance does not include posting, controlling and completing all the data. OCR software also needs to be optimized in order to understand the invoices. It's a useful tool, but human actions are still necessary for each invoice.

Moreover, it is not always flawless. OCR technology does sometimes interpret 'zero' as a 'o', while this should be a '0'.

What can my organization expect from OCR?
Supported by OCR, one FTE can process 12,500 invoices. Whereas the average for a complete manual processing is only 5,000.

2.2. Receive and process invoices as data (e-invoices)

The quality, reliability and efficiency of robotic accounting is much better when working with data that is 100% accurate. With an electronic invoice – or e-invoice – there no longer is erroneous data because this type of format is 100% data.

This means no (scanned) PDF invoice that needs OCR, but only a data file containing all the information which must appear on an invoice and is needed to post the invoice. The invoice is often still sent by email so it can be viewed by a human.

Due to a lack of standardization, e-invoices are available in numerous types. The most common formats are:

- EDI – Electronic Data Interchange
- XML – eXtended Markup Language
    - UBL – Universal Business Language

There are many variants of XML. This makes interpreting e-invoices sometimes difficult, because suppliers often send different formats. In recent years, however, UBL is gaining more popularity in the financial world. It could become the standard if the trend continues.

Meanwhile, there is a solution to this problem; the e-invoicing hub. This is a digital place that can process every file format. The hub then converts the incoming files into a single file format for processing in the accounting or financial software.

More on the e-invoicing hub in Chapter 3.

What can my organization expect from e-invoicing?
Using e-invoices for invoicing allows about 20,000 invoices per FTE annually. This is almost 2x as many relative to only using OCR for scanned invoices.

2.3. Automatic invoice matching and booking

This is where the accounting robot really comes into play. If the organization uses OCR or e-invoices, the accounting robot can do many interesting things with the gathered data. Think of making booking proposals and automatically matching invoices with

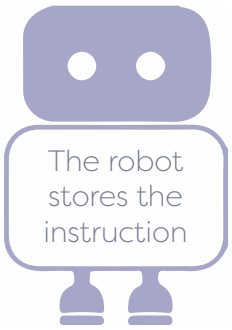
purchase orders or contracts.

Automatic matching takes care of much of the repetitive work that is otherwise done by humans. Deviations between order, receipt and invoice become immediately apparent and manual data entry is minimized. Submitted invoices are checked and posted; That's what the robot does for you. All the matching logic in robotic accounting is standard.

The robot can also use invoice data to post invoice to the general ledger. For example product group (or NZI code) can be mapped to GL codes. And locations mentioned on the invoice used to post certain costs to the appropriate cost centers. With this level of automation these "robot instructions" need to be entered manually by humans.

How this works with the WorkFlowWise standard can be read in Chapter 3.3.

Wat can my organization expect from automatic matching and booking?
With automatic matching and booking one FTE can process up to 50,000 invoices annually. The cost of implementing this type of automation recoups itself in a very foreseeable future.



Bookings instructions for de robot

With the e-invoice data – or data from a (scanned) PDF invoice – the robot can start processing and make calculations. It is now possible to give the robot instructions. For example:

- Invoice lines with a particular product code on the invoice can be booked on a predetermined ledger.
- The robot can also look up the purchase orders or contracts to match with the data on the invoice.

All intended to automatically process the invoice.

2.4. Automatic invoice processing based on crowd accounting

The most recent development in account is crowd robotic accounting – the most advanced form of robotic accounting. Just like other forms of robotics does robotic accounting require clear instruction before it can function.

Yet, crow robotic accounting goes further than the dependency on manual instructions. This advanced robot makes use of crowd data: a large group of organization that share their accounting history. The robot uses this rich source to analyze and determine

the best way to post and process invoices for your organization – by using the organization's own data and compare these with the data from the crowd.

Crowd robotic accounting works in in 3 steps:

1. The robot looks at your organization's accounting history to learn how it does its accounting. This history can be uploaded from Excel.
2. The robot needs to know what data in the crowd is comparable. It asks a few simple question, such as company size and industry the company is active in. Using that data, the robot can determine which booking proposals are common for this type of organization.
3. The last step is giving the robot a degree of certainty – It
    a. Staat de zekerheid op 10%? Dan stelt de robot bijna geen vragen, doordat een mate van 10% zekerheid al snel vastgesteld kan worden.
    b. Staat de zekerheid op 95%? Dan stelt de robot juist veel vragen totdat er voldoende zekerheid is.

    wants to know how independent it can act:

The robot remembers the answers and preferences. Once a similar invoice enters the system the robot will need less additional information – if any – to process. The robot becomes increasingly autonomous and makes more independent decisions.

The only thing your need to do is give the robot its instructions, which the robot itself proposes. What an ambitious employee!

What can my organization expect from crowd robotic accounting?

By using crowd robotic account, we have seen cases where one person can handle over 200,000 invoices annually. An organization processing one million invoices only needs five full-time employees. Please take note that in order to reach these number there needs to be a high percentage of e-invoices for the robot to process, otherwise there is still the requirement for manual work.

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3. Robotic Accounting with WorkFlowWise GO-Spend

The ready-to-use application for the purchase-to-pay process WorkFlowWise GO-Spend is at the frontier in the field of robotic accounting. Through a host of opportunities we can help your financial organization obtain a digital advantage. The result is operational efficiency and better business results.

Every robotic accounting proficiency is possible in GO-Spend. The best fit for your organization depends on the type of invoices being processed and the total amount, among other factors. However, a higher degree of automation results in fewer manual labor and greater efficiency.

3.1. Paper and PDF invoice recognition with OCR as a Service

Not all invoices will magically be received electronically. The first step forward towards is the automated character recognition of (scanned) PDF invoices.

The OCR service makes optimizing of OCR unnecessary. In our application, it is possible to indicate whether you want to use the service with a simple check mark. For a fixed amount apiece, the invoice is automatically recognized and the data supplemented.

Any deviations are immediately visible in the system. As a result, an invoice is never booked if the data is not correct and a notification ensures that it is in the right persons workflow.

3.2. Digitally receive and process e-invoices

Suppliers send e-invoices in XML, EDI, UBL, and many other variations. Most accounting software can't work with all these variations, which is why we use the e-invoicing hub ¬in GO-Spend. It can process any type of e-invoice.

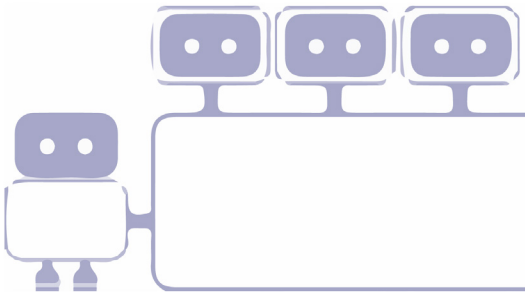
The supplier sends its e-invoices to the hub, which then converts the data to a single, unified file format that can be read by GO-Spend. Regardless the XML or EDI format the hub receives, as long as it's digital data. It makes bookkeeping effortless.

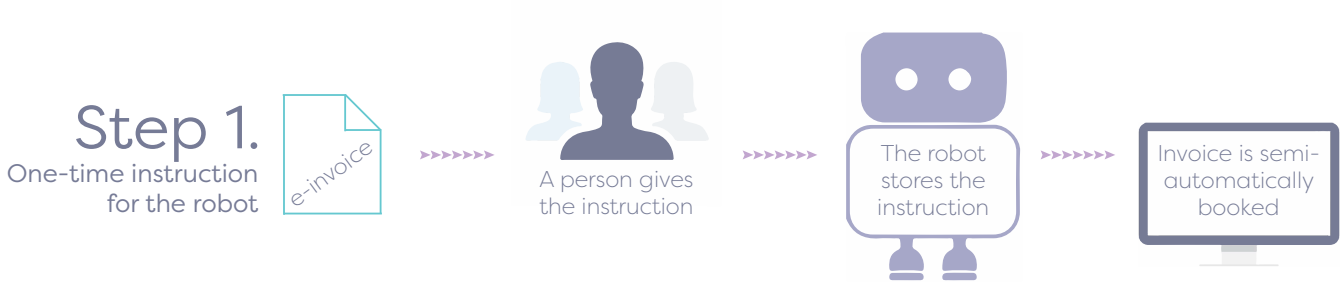
Because GO-Spend integrates with every major accounting software it isn't necessary for your accounting software to understand the e-invoices. GO-Spend receives the e-invoices and processes these digitally. GO-Spend then integrates with your accounting software to post the invoices.

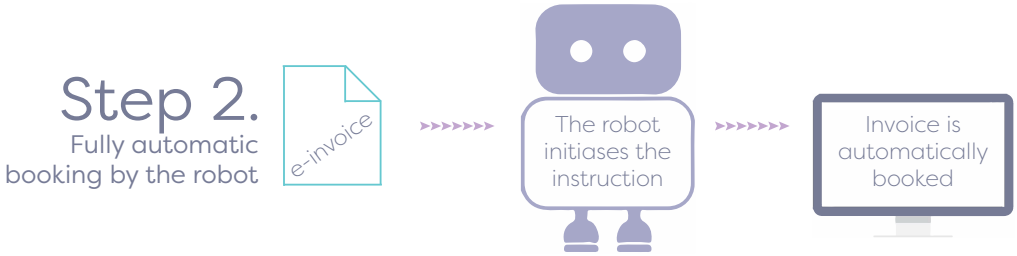
Dit is hoe digitaal ontvangen en verwerken in een notendop werkt:

E-invoicing hub

The e-invoicing hub is an online environment that can receive and convert every type of e-invoice into every desired type of e-invoice. The e-invoice can then be processed in the accounting or financial software as a result. The hub allows supplier and purchaser to exchange information that is not the same format. With the addition of accounting rules and computational capabilities the hub is a truly valuable asset to any organization.







3.3. The crowd accounting robot

The crowd accounting robot in GO-Spend makes it possible to compare your accounting history what that of your peers – based on industry or type of organization – and makes booking suggestions based on the aggregate information it analyzes.

Also see page 12 for a visual example.

This is how it works:

- You upload your existing booking history via Excel
- The uploaded data is compared to similar data based on your organization and industry
- The robot is given a minimum degree of confidence. If the degree is 50%, it means that the robot must be confident that more than half of your organization's peers process invoices in similar fashion.
- The robot then makes a booking proposal: *"I see that most companies in your industry book their products in this way. Shall we do the same for you?"*
- You decide whether the robot can perform these actions or not. If it's a thumbs up, the robot will always follow those instructions.

3.4. Automatic matching and processing

The most advanced form of automation is matching and processing invoices automatically. In combination with the crowd accounting robot one person can process over 200,000 invoices per year. Yes, 200,000 invoices.

All invoices that enter the system – both (scanned) PDF invoices and e-invoices – can be matched and processed automatically by the GO-Spend robot. It can autonomously act to a very high degree.

An example is matching periodical invoices with contracts, and booking these on the correct ledger – Or divide invoices among different ledgers, such as telephone costs that often fall under different departments. In that case, future invoices are no longer processed by hand, because coding and payment terms are automatically taken from the contract.

For a full match with the installment amount and the contractual agreements, the manual approval of the invoice unnecessary. This might work for invoices on housing or other bills with static recurring costs.

To spare the administration the GO-Spend robot runs a checklist when an invoice enters the system:

1. Check products received

The robot first checks whether the products have been delivered – Based on the order number on the invoice. If there is a match, it verifies the actual deliverance with the numbers on the invoice. It matches prices on the order and amount of units on the receipt to the invoice. Visual aids pop-up in case of deviations, and even show the cause of the deviation; such as amount, pricing, or additional costs.

2. Check contracts

If a matching delivery is missing, the robot checks if the invoice is related to a contract. It automatically searches for similarities, such as contract number – or license plate in case of a car lease contract. In case of the latter, it will determine of the amount in the contract is the same as the invoice.

3. Check orders

In case of a purchase order, but missing delivery or contract, the robot uses the purchase order to check the invoice. It is then send to the creator of the purchase order, who can manually indicate whether the ordered goods or services are delivered.

4. Booking proposal check

When all of the previous steps offer no conclusion, the robot looks for predefined rules set for the supplier the invoice is from. A booking proposal example: 20% of cellphone costs are booked on the Sales & Marketing ledger, 80% on the Consultancy department. An employee only needs to verify that the proposal is correct before it's booked.

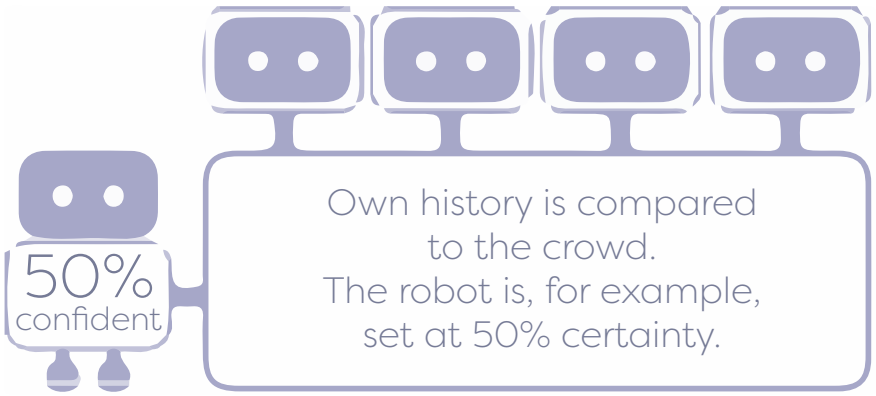
5. Add to the worklist

Is there nothing to match with – the invoice will be added to the worklist of the administration for manual processing. If there is a purchase order, the invoice might go back to the creator of this order if the amount is incorrect or in case of other deviations. The administration or creator of the order can approve or ask for feedback from the supplier.

An EXAMPLE of

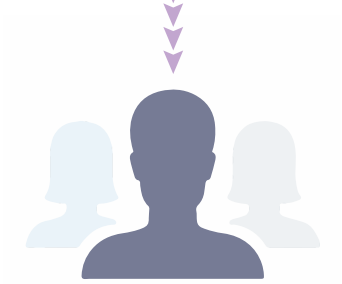
Crowd

robotic accounting



Own history is compared to the crowd. The robot is, for example, set at 50% certainty.

Less than 50% of similar organizations in the crowd use the same method.



The employee receives a suggestion from the robot and must decide.

Invoice is booked with some human intervention

Own history or **more than 50%** of similar organizations in the crowd uses the same method.

Invoice is automatically booked

One FTE **200.000 invoices** annually

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4. Getting started with Robotic Accounting

So you want to get started with robotic accounting. That's good news, because you don't need to purchase new accounting software. An add-on to the current financial system is already adequate.

GO-Spend can enrich the existing software with additional features. We help organizations improve their processes since 1997, making them more efficient and give them increased levels of control and insight.

GO-Spend offers functionality in the areas of:

- Invoicing
- Invoice Matching (matching orders and receipts)
- OCR-as-a-Service
- E-invoicing Hub (for receiving and processing e-invoices)
- Crowd accounting robot
- Procurement and e-procurement
- Budget Control
- Contract Management
- Declaring Digital via mobile

4.1. Embrace the digital revolution

The benefits of robotic accounting are evident. Control over transactional tasks will increasingly be assumed by robots. This isn't bad news, it is progress, as described in this white paper.

Robotic accounting offers finance departments an array of new options. Employees are left with more quality time, adding more value to the company. Once the robot is fully functional the welcoming side effect is a decrease in errors, as the robot can work more meticulous than a human ever will.

Learn to spot technological developments and try them, it might save you time and valuable resources moving forward. Robotic accounting is one such development.

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About Us

WorkFlowWise

In a world of digital disruption, business and IT leaders need to constantly look for new ways to create value and maximize business performance. WorkFlowWise uses cloud technology to take workflow automation to a new level that unlocks and delivers digital advantage. Our solutions are quick to develop and implement; easy to integrate and use; straightforward to change and manage. They can be extended throughout a customer value chain to create customer intimacy and engagement.

Our any-device, any-browser-based solutions enable back office burdens to become effective business processes that open new opportunities. By taking a thoughtful approach to automating a workflow end to end, you can speed up processing, reduce manual interventions, mitigate risk, decrease costs and uncover precious activity that adds value to your business.The result is operational efficiency and better business performance.

WorkFlowWise**GO**

Ready-made, ready-to-use apps for everyday business processes.

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