

The Business Case for Automating Payments Processing and Cash Application

Building a Realistic ROI Model and a Winning Business Case

By: Jay Tchakarov

Abstract

This article will help you develop a business case for justifying investments in an automated cash application system.

Throughout the paper are examples of actual improvements and efficiencies from automation efforts realized by businesses we have closely worked with over the years.

Those responsible for incoming payments processing and cash application are acutely aware of the need for automated systems to reduce or eliminate the time required by the numerous manual tasks in the end-to-end process. Freeing up resources tied to cash application is one of the single biggest opportunities to enable improvements throughout Accounts Receivables. Accounts Receivables (A/R) often makes up 40% of the assets on a company's balance sheet, and effective management is critical. Automating as much of receivables management as possible is a proven method for achieving savings, improving days sales outstanding (DSO), and maximizing operational efficiencies. And cash application is a process that, due to its low value-add nature and manual nature, is a prime candidate for automation through technology.

A key challenge in technology purchases is gaining approval from upper level executives who require formal analysis and justification. As a result, it's necessary to have a strong sales mindset when your funding request competes against other projects for capital and operating budget dollars. In many companies, IT projects must be justified through formal processes that detail the spending requirements and estimated savings to produce a return on investment (ROI) measurement. Justifying a project that does not require capital expenditures, such as subscribing to a Software-as-a-Service (SaaS) solution, will often prove easier and less time-consuming for companies where such a solution is a fit.

This whitepaper will help you develop a business case for justifying investments in an automated cash application system. The paper will focus on (1) the ways to identify and quantify the benefits from automating cash application, (2) how to calculate the financial return, and (3) how to prepare a business case to gain executive approval. Throughout the paper are examples of actual improvements and efficiencies from payment processing automation efforts, as seen by Account Receivables departments across industries and sectors.

Introduction

CFOs are not always tuned into the issues mid-management must address in their daily functions. Their perspectives are more from a corporate view, taking into account overall financial performance. Tips for an effective approach to developing a winning case for automated receivables management include:

- Thinking like a CEO with a focus on bottom line results
- Presenting your request in strong business terms
- Recognizing there are competing requests for capital and resources
- Resisting the temptation to base justification on the premise that it will make life easier for you
- Quantifying technology benefits based on facts

Developing a Business Case

Executive management views successful projects as either making money, saving money or strengthening an existing initiative. Persuasive arguments for technology investments should be framed in these terms. Unfortunately, departments often attempt to convince management to fund projects based upon statements such as these:

- “We are stretched thin and so we need better systems to reduce the stress on our personnel.”
- “My team is frustrated because of repetitive, manual work.”
- “We can serve our customers better.”

Each one of these “rationales” for bringing in an automated system carries with it an element of subjectivity which can be negated either through more objective thinking or a difference of opinion. For example, the complaint of being stretched thin will most likely be countered by a statement of “you need to do a better job of managing the workload across your department.” As such, the problem may be turned around to reflect poorly on your leadership. The frustration argument may lead to a discussion or a lecture about how personnel need to do a better job of controlling their emotions, or be more appreciative of the jobs they were hired to do. Using emotional approaches to build a case can turn the discussion away from the issues that you want to address. While customer service is certainly a noble goal and one that management values, unless you are able to back up your assertion of better customer service, this point will be seen as vague. There is no universal measurement for valuing good customer service, therefore it must be defined within each organization. If there are such measurements at your firm, you must show in quantitative terms how you will meet or exceed them.

Metrics Executives Look for to Frame a Compelling Business Case

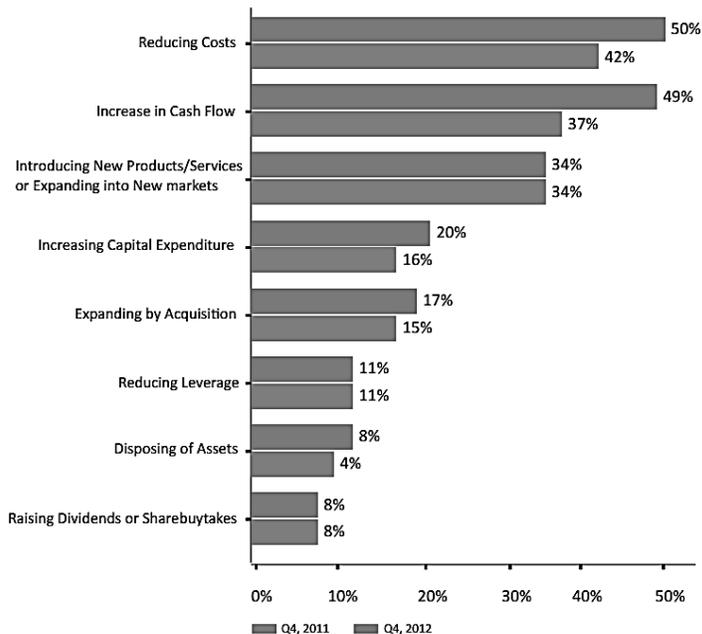


Figure 1: The Deloitte CFO Survey, Q4, 2012. Current and past copies of the survey may be found at www.deloitte.co.uk/cfosurvey

So just what are the quantitative metrics and measurements that executives are looking for to frame a compelling business case? To begin, look at the priorities of one very important decision maker, the CFO. CFOs are very concerned with how to “do more with less.” This translates into two important performance indicators: reducing costs and increasing cash flow. Figure 1 shows the results from a 2012 Deloitte CFO survey of their corporate priorities for the next 12 months. The survey looks at the changes from Q4, 2011 to Q4, 2012. Cost control is the leading priority for CFOs; 50% of respondents rated this as a strong priority. Increasing cash flow follows close behind with a 49% acknowledgement. This focus on defensive, rather than expansionary, strategies further underscores the need for a strong, quantitative business case for financial approval.

An important component of a winning business case is to set clear objectives. By establishing clear objectives, you are able to remain focused on what is important and communicate with your executives in a language they will understand. Setting up these clear objectives is centered upon understanding the value from the Executive’s perspective. Instead of viewing this activity as “what is in it for you”, communication should be about “what is in it for the Executives”. Three good questions that will establish clear objectives are:

- What is the investment?
- What is the value?
- What is the payback?

These three questions build upon each other. The first question establishes the costs of this project, while the second outlines the benefits. For a cash application initiative, the benefits are

usually best described in terms of savings – savings in terms of human resources FTEs (full time equivalent) that can then be refocused on higher value activities or in dollar terms.

The third question uses the costs and savings as inputs in a financial analysis to determine the ROI. ROI helps management understand, rationalize and prioritize purchase selections, and ensure these choices maximize payback and minimize risk. The three common measurements of an ROI analysis are net present value (NPV), internal rate of return (IRR), and payback period, which is the time required until the savings outweigh the investment costs. This payback period is often referred to as the breakeven point, because that is the time when the savings become equal to the investment.

The Investment and Costs

It is important to understand the full costs of the project that you will incur to reach the desired business objectives or automation goals. We will discuss how to set these goals realistically in the next section. This includes not only the up-front costs but the ongoing costs to run the system. A cash application project, like any IT project, should be considered in terms of a number of components. Some common ones to consider:

1. Hardware – do we need to buy, install, and maintain new hardware?
2. Software – how much do I pay for the product; how is it spread over the evaluation horizon?
3. Vendor setup project– how much will it cost me for the vendor to implement the project with the characteristics necessary to achieve the expected automation targets?
4. Internal project resources – how many resources do my team and the IT department have to allocate to the project, how many hours, over how long, and what will be the impact?
5. Ongoing system maintenance – how will the system be maintained, updated, and managed and what will this cost?
6. New system management tasks – what tasks will my team need to perform and how often to keep the system running as expected on top of their day-to-day business activities?

Hardware

Depending on the delivery model, on-premise or Software-as-a-Service (SAAS), you may have to consider hardware costs. For on-premise solutions, you will have to procure servers and software licenses. Additionally, there may be IT resources that will have to be accounted for to install, configure, and manage the new hardware. For SAAS projects, there is no hardware to procure and manage as the system is delivered entirely through the cloud (over the internet).

Software

Typical technology solutions can follow License and Maintenance (L&M) or SAAS models. For L&M solutions, you should take into account not just the upfront license costs but also the maintenance costs over the entire period over which you are evaluating the project. For SAAS solutions, there is typically no up-front cost but periodic service charges will be charged based on usage. It is important to understand all charges that you will be liable for, and under what circumstances you will incur them so that you can estimate the recurring fees over the evaluation horizon.

Vendor Setup Project

Setup costs usually cover any work that the vendor team needs to perform in order for your team to achieve your automation and savings objectives. This would cover installation and configuration time as required. For some systems, custom work may be needed.

Internal Project Resources

It is easy to forget that you will have to dedicate resources, both from your team and from IT to this project. Depending on the integration requirements and system capabilities, more or less time will be needed. Traditionally, we do not include the opportunity costs of waiting on IT to staff the project in this analysis. However, the less dependency on IT resources – the faster and cheaper a project goes live.

Ongoing System Maintenance

For on-premise solutions, you will have to account for update and upgrade costs if you are to take advantage of new capabilities and enhancements. Some questions to understand are how often updates are released, what capabilities they cover, and what does it take to apply them. You have to be careful here since for some on-premise systems such upgrades can be significant IT projects on their own and are associated with delays and system down-time. For SAAS systems, the vendor is responsible for any updates and any work on upgrades is usually seamless and subject to standard service level agreements (SLA). The cost of SAAS updates is part of the recurring fees.

New System Management Tasks

This is a key part that is often missed in business cases. It covers the tasks that you and your cash application team did not have to perform before but that will now have to perform on a daily (or other periodic) basis by nature of working with the system. One regular example that should be considered here is the management of OCR templates for reading paper checks and electronic remittance if the system does not work with email or web portal remittance natively and requires the transformation to scanned image.

The Value – What Will Automation Save Me?

The second piece of the puzzle is identifying what you will save from implementing the system. Having realistic numbers for before and after is the only way you will have realistic understanding of what the system will do for you and where your savings will come from. Of course, this is also the only way to understand the magnitude of these savings.

The best practice is to follow an adjusted value stream analysis process:

1. Define the tasks
2. Break key tasks down into smaller tasks and sub-tasks
3. Identify opportunities for improvement
4. Model the potential benefits

Defining the Tasks

The set of high-level tasks you start with for your cash application process will vary between companies. In general, they will depend on a number of factors. Some common ones are your mix of customers and the way they pay (paper checks vs ACH/EFTs and credit cards), your relationship with your bank and whether you are already paying for lockbox service and key-in fees, and your ERP or accounting system capabilities.

For cash application, some key tasks can be grouped together based on the payment type and the source of the incoming remittance information. A high-level list of tasks can be generated considering the following remittance sources:

- Remittance information received through bank lockbox files
- Paper remittance received directly (not through lockbox files)
- Remittance received through EDI transactions
- Remittance received via e-mail, either as part of the e-mail body or enclosed in attachments
- Remittance information presented on customer websites and other 3rd party portals

Identifying Key Tasks and Sub-Tasks

With the above remittance formats, a common list of associated cash application tasks has been generated for consideration:

High-level Task	Example Detailed Tasks
Process payments and remittance received through bank lockbox services	<ol style="list-style-type: none"> 1. Preparing file, configuration to process with ERP's lockbox processing program 2. Resolving posting errors after initial processing through the lockbox program 3. Reading the paper remittance images from the bank files 4. Cleaning up remittance to identify correct invoice paid 5. Posting payments on-invoice or on-account
Process paper remittance (not received through the bank lockbox file)	<ol style="list-style-type: none"> 1. Linking the paper remittance to correct payment in the bank payment file 2. Reading the paper remittance 3. Cleaning up remittance to identify correct invoice paid 4. Posting payments on-invoice or on-account
Process EDI Remittance	<ol style="list-style-type: none"> 1. Preparing the EDI file to process through the EDI processing program or with manually managed excel workbooks
Process remittance received via e-mail and e-mail attachments	<ol style="list-style-type: none"> 1. Scanning inbox and downloading remittance information 2. Reading and capturing the remittance data 3. Linking the remittance to the correct payment in the bank payment file 4. Cleaning up remittance to identify correct invoice paid 5. Posting payments on-invoice or on-account
Process remittance delivered through customer websites and portals	<ol style="list-style-type: none"> 1. Logging-in and downloading the required remittance document 2. Reading and capturing the remittance data 3. Cleaning up remittance to identify correct invoice paid 4. Posting payments on-invoice or on-account
Process payments without remittance	<ol style="list-style-type: none"> 1. Reach out to payers for clarification 2. Correct illegible remittance information
Creating deductions	<ol style="list-style-type: none"> 1. Create deductions 2. Cross reference customer reason codes 3. Code deduction correctly with internal reason code

Identify Opportunities for Improvement

For each of these and other tasks your team performs, review your current process and identify how many hours per week on average your teams spends on that task. This will give you the total FTEs your team spends on applying cash over a given period. This is also the amount of work that you need to be able to complete with the new system to continue functioning at the same level of productivity.

To get to the savings, review how much time your team will be spending on each of these tasks after the new system goes live in the To-Be process. Make sure to understand any additional new tasks you will have to spend time on in the To-Be state. Also, hold your vendors responsible for achieving the operational efficiencies that they promise and that you will be using to get the To-Be savings below.

Tasks usually introduced by some traditional systems that should be considered in the To-Be process costs are:

1. Management of templates – Templates are the way traditional OCR systems know where to read data from on the paper remittance. The issue is that with different formats and more information that payers are including in the remittance, the exceptions that require analyst intervention grow, and this requires an ever growing number of templates. The time spent looking through templates, cleaning up thousands of templates and creating templates on a daily basis should be included in the To-Be process tasks.
2. Converting electronic remittance to paper and fixing errors – Electronic remittance is a great tool and candidate for automation. The data is already high quality, digital data so the accuracy of reading and processing it can reach close to 100%. However, traditional OCR systems who do not process electronic remittance natively but instead rely on transforming it to images or printing and scanning it, introduce the possibility of error by going through the lo-fidelity print format and the OCR engine. The work to handle these exceptions should be considered as well.

Model the Benefits

A simple cost breakdown before and after can start off looking like the following table in Figure 2. Additionally, you can further break it down per the needs of your process.

Activity Group / Activity	Status Quo (Hours / Week)	With Solution (Hours / Week)
<i>Payment and Remittance through Bank Lockbox</i>		
Preparing file for the lockbox program	? hours	? hours
Resolving errors after initial processing	? hours	? hours
Reading paper remittance image from file	? hours	? hours
Check remittance data to identify right invoice	? hours	? hours
Posting on-account or on-invoice	? hours	? hours
<i>Paper Remittance not received through Lockbox</i>		
Linking remittance and payment	? hours	? hours
Reading the remittance	? hours	? hours
Check remittance data to identify right invoice	? hours	? hours
Posting on-account or on-invoice	? hours	? hours
<i>EDI Remittance</i>		
Preparing EDI file for processing	? hours	? hours
<i>E-Mail Remittance</i>		
Fetching remittance from e-mails, attachments	? hours	? hours
Reading the remittance	? hours	? hours
Linking the remittance to payment	? hours	? hours
Check remittance data to identify right invoice	? hours	? hours
Posting on-account or on-invoice	? hours	? hours
<i>Website, Portal Remittance</i>		
Downloading remittance	? hours	? hours
Reading remittance	? hours	? hours
Check remittance data to identify right invoice	? hours	? hours
Posting on-account or on-invoice	? hours	? hours
<i>Exception Handling (missing remittance, illegible remittance information)</i>	? hours	? hours
<i>Deduction, Dispute Coding</i>	? hours	? hours
<i>Additional Tasks</i>		
Managing Templates	? hours	? hours
Resolving electronic remittance OCR processing errors and exceptions	? hours	? hours
TOTAL	? hours	? hours

This method will help you identify the current demands on your team in terms of FTEs or time spent to process cash. It will also show you the ‘To-Be’ demands or how much time your team will need to allocate in terms of FTEs to process the same payment volume with the system you are evaluating.

$$\text{Savings}(\text{hrs}) = \text{Hours before} - \text{Hours after}$$

Notice that if your team is spending more time to do their work with the system than without, this project does not make sense already.

The final step to calculate dollar savings is to multiply the hours saved per week before and after by the loaded labor costs:

$$\text{Savings}(\$) = (\text{Hours before} - \text{Hours after}) \times \text{Cost per hour}$$

Alternatively, you can use FTEs and the result will be the same:

$$\text{Savings}(\$) = (\text{FTEs before} - \text{FTEs after}) \times \text{Cost per FTE}$$

One additional step you may want to go through when evaluating savings is to consider multiple scenarios and levels of automation. For example, you may want to consider a conservative scenario of 30% no-touch automation of paper checks, typical of traditional systems. You may also include a best case based on vendor claims and a realistic scenario based on conversations with references and other factors.

The Payback or Should We Do This at All?

As the final step in developing the ROI model, the inputs are summarized across all expenses and savings, and the financial calculations are performed. The different expenses and savings usually considered for project ROI calculations are described below.

Capital Expenditure

This item would include all costs incurred in the initial setup and the costs associated with the implementation project. These would include costs towards one-time software licensing, other one-time software costs, as well as internal resource costs incurred towards the actual implementation. Software solutions providers also charge consulting fee for product implementation, which should also be reconciled under this section.

Recurring Annual Expenditure

All recurring fees, such as costs incurred towards software maintenance and depreciation over the five year useful life, are reconciled under this heading. If the software is delivered as a service (software-as-a-service) then the recurring expenses need to account for the annual subscription charged for the software. Software updates and upgrades, which require additional expenditure or internal resource allocation, should be added under this heading as well.

Net Profit Impact

This item tries to account for the net operational savings achieved with the software solution being evaluated. It is possible that the solution might be resulting in a net negative impact in terms of operational costs, in which case the value would be considered as a negative in the calculations. In addition to direct FTE-related operational savings, profit impact can also cover

savings from reduction of bank lockbox fees. If an automation solution can help in eliminating the data key-in costs, which often form a significant part of the bank lockbox expense statement, those savings should reflect in this head.

Getting to the Math

Once the cash flows (net of costs and savings) are laid out by year, the Net Present Value (NPV) measurement for the ROI calculation is used, with a discount rate dependent on your business, to decide whether the project is financially attractive. Typical calculation parameters would differ depending on whether you are calculating for a software-as-a-service or an on-premise solution. Examples for both have been provided below.

On-Premise Software – ROI & NPV Example

A. Capital Expenditure	Year 1	Year 2	Year 3	Year 4	Year 5
Additional Hardware/Servers	\$ 15,000				
Software Licenses	\$ 60,000				
Other Vendor Fees	\$ 7,000				
Consulting/Implementation Fees	\$ 40,000				
Internal IT Resource Costs for Implementation	\$ 10,000				
Internal Business Resource Costs for Implementation	\$ 5,000				
Sub-Total	\$ 137,000	\$ -	\$ -	\$ -	\$ -

B. Recurring Annual Expenditure	Year 1	Year 2	Year 3	Year 4	Year 5
IT Maintenance Cost (On-Premise Software)	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000
Software Maintenance Fees	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000
Depreciation	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
Sub-Total	\$ 92,000				

C. Net Profit Impact Estimate	Year 1	Year 2	Year 3	Year 4	Year 5
Operational Expense Savings					
(less) Reduction in FTE Costs	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
(add) Costs for Additional Business Processes	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operational Expense Savings	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
Bank Fee Savings	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
Sub-Total	\$ 100,000				

Cash Flow	Year 1	Year 2	Year 3	Year 4	Year 5
Cash Flow Before Tax (C-B-A)	\$ (129,000)	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000
Tax @ 40%	\$ 51,600	\$ (3,200)	\$ (3,200)	\$ (3,200)	\$ (3,200)
After Tax	\$ (77,400)	\$ 4,800	\$ 4,800	\$ 4,800	\$ 4,800

Depreciation Add Back	-	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
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Net Cash Flow	\$ (77,400)	\$ 4,800	\$ 4,800	\$ 4,800	\$ 4,800
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NPV @ 8%	\$ (61,502)				
Internal Rate of Return (IRR)	-39%				

Software-as-a-Service – ROI & NPV Example

A. Capital Expenditure	Year 1	Year 2	Year 3	Year 4	Year 5
Additional Hardware/Servers	Not required for SaaS				
Software Licenses	Not required for SaaS				
Other Vendor Fees	\$ 7,000				
Consulting/Implementation Fees	\$ 40,000				
Internal IT Resource Costs for Implementation	\$ 10,000				
Internal Business Resource Costs for Implementation	\$ 5,000				
Sub-Total	\$ 62,000	\$ -	\$ -	\$ -	\$ -

B. Recurring Annual Expenditure	Year 1	Year 2	Year 3	Year 4	Year 5
Subscription Fees (SaaS Software)	\$ 80,000	\$ 80,000	\$ 80,000	\$ 80,000	\$ 80,000
IT Maintenance Costs (Internal)	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
Depreciation	Not applicable for SaaS				
Sub-Total	\$ 83,000	\$ 83,000	\$ 83,000	\$ 83,000	\$ 83,000

C. Net Profit Impact Estimate	Year 1	Year 2	Year 3	Year 4	Year 5
Operational Expense Savings					
(less) Reduction in FTE Costs	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
(add) Costs for Additional Business Processes	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operational Expense Savings	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
Bank Fee Savings	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
Sub-Total	\$ 100,000				

Cash Flow	Year 1	Year 2	Year 3	Year 4	Year 5
Cash Flow Before Tax (C-B-A)	\$ (45,000)	\$ 17,000	\$ 17,000	\$ 17,000	\$ 17,000
Tax @ 40%	\$ 18,000	\$ (6,800)	\$ (6,800)	\$ (6,800)	\$ (6,800)
After Tax	\$ (27,000)	\$ 10,200	\$ 10,200	\$ 10,200	\$ 10,200

Depreciation Add Back	Not applicable for SaaS				
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Net Cash Flow	\$ (27,000)	\$ 10,200	\$ 10,200	\$ 10,200	\$ 10,200
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NPV @ 8%	\$ 6,784				
Internal Rate of Return (IRR)	19%				

Notice that some of the elements above will not apply to all systems. We have tried to include some costs elements that our customers have come across. The exact nature of these will depend on the specifics of each solution.

Real World Example

The Coleman Company, Inc. is a worldwide leader in the outdoor recreation industry, developing products for a wide array of markets, including family and extreme camping, backyard recreation and hiking. After an evaluation of their receivables management processes, Coleman identified the need for more automation, especially in the areas of cash application and deductions research operations. Their challenge was not uncommon: improving a cash application function that was error prone and very time consuming. The result of customers using disparate forms of payment (check, ACH and wire) and remittance detail (paper, EDI, websites and email) was a series of manual processes.

By automating their cash application function from end-to-end, Coleman was able to:

- Achieve a quick payback on their initial investment
- Automate the process of gathering the data needed to auto-apply cash
- Leverage standard ERP cash posting

Conclusion

Some final suggestions for developing your business case include contacting other credit professionals in your network to learn how they have succeeded in gaining executive approval for technology projects. But don't stop there. Understand the budgeting cycles within your own company and be sure to meet any deadlines for capital and operating expense requests. A project which is included in an annual budget plan has a greater chance of implementation than one not budgeted. You can also learn from individuals in your own organization who work in other functional areas – sales, customer service, and supply chain – who must compete for limited funds via a business case approach.

Below are several of the key points to remember in developing your winning business case for receivables automation:

- Put yourself into the shoes of your senior management
- Most CFOs are looking for hard ROI and the initiative should make or save money
- Look in your organization at the past history of how projects have been approved for funding
- Understand the full cost of the solution – from setup and implementation to maintenance and working with the new system
- Understand where the savings will come from - review the current and To-Be process task by task to understand where your team is spending time now and where they will spend time in the future
- ROI models consist of costs, savings, timing of cash flows, cost of capital, Net Present Value, Internal Rate of Return, and payback period

As part of HighRadius' executive team, Jay Tchakarov is responsible for driving the market-leading enterprise Credit and A/R products and for defining a holistic strategy to strengthen HighRadius' leadership position in the space. He and his team work closely with sales, consultants, and customers to make sure the products address critical pain points and provide quantifiable, high-value solutions.

Jay joined HighRadius from PROS Pricing, a leader in pricing software, where he managed an innovative suite of products that led the penetration of new markets and the definition of PROS' cloud strategy.

Jay graduated summa cum laude and received a BS in Computer Science from the University of Louisiana at Lafayette, an MS in Computer Science from the University of Illinois at Urbana- Champaign, and an MBA from Jesse H. Jones Graduate School of Business.