



# One Size Fits Nobody

Remote Deposit Capture in an  
Enterprise Payments World

by J. D. (Denny) Carreker and Suzette Massie



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*With average annual temperatures of 73° and 77°, Phoenix and Honolulu would seem to be equally balmy. But the coldest/hottest months in Phoenix average a wide-ranging 39° and 104°. In Honolulu, they fluctuate mildly at 66° and 82°.*

- Data point: In a survey of the magazine's readers by Treasury and Risk Management and Wells Fargo, 80 percent said Check 21 has had little or no impact on their businesses, and only 16 percent said their companies are using remote deposit – that is, capturing images of checks and depositing those images rather than the checks themselves.

A meager showing of Check 21's most touted potential technological advance?

- Data point: In a report Celent titled "Remote Capture: The Next Frontier in Cash Management," Celent analyst Alenka Grealish writes, "Remote capture is breaking geographic and price barriers. Celent estimates that US \$150 million to US \$200 million in commercial deposits are going to switch hands in the next twelve months to banks offering remote capture."

Hmmm... A much more ambitious state of affairs?

Nothing obscures like averages. Academics refer to a "tyranny of the mean" – the masking of the extremes by the assertion of the middle.

The impulse to average is sensible. It is the urge to simplify piles of data in the interest of determining a trend, reaching a conclusion, or supporting a decision – to make sense of what can be observed. Averaging is especially useful in a fast-changing environment where the goal is less about precision, and more about being directionally correct. In an environment where laws and technology are in flux, businesses are betting millions on opposing outcomes, and customers are weighing in with competing needs, industry averages might be the readiest analytical data available.

This is today's payments environment. Check 21 and related technology changes have wrought massive change, created substantial opportunity, and brought some big price tags. So it is not surprising that some broad-brush averaging is obscuring the positive and negative particulars of remote deposit capture (RDC).

The purpose of this paper is to describe the emerging world of remote deposit capture – not in broad brush strokes, but by drawing fine distinctions about how different industries, different companies, different point of sale strategies, and different banking relationships can upend the "averages."

Such a description should in turn serve companies who are building their business cases for RDC and banks who are attempting to serve companies with tailored services in the new payments environment.

To help us along that task, we analyzed 300 corporations in terms of how much value RDC would bring them, given their unique business profiles. We chose this approach in the wake of a custom consulting engagement to help a large banking company understand the RDC-



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related demand and requirements among its corporate customer base. At the conclusion of that engagement, we determined that it would be helpful to the banking industry and their corporate customers if we were to expand the scope of the analysis and the spectrum of businesses to deliver greater insights into the potential value of RDC.

This paper is based largely on our analysis of the 300 corporations and personal interviews with several of them. In addition, it is informed by our decades-long consulting relationships with scores of large U.S. banks and our experiences providing a full suite of remote capture technology solutions, through which we have up-close insights into the dynamics of RDC's value for our bank clients' customers.

## Background: RDC

Like a lot of technology change, RDC had somewhat stealthy origins.

To generalize, before Check 21 most corporations found it easier to pay banks to “just handle it” for them. Large scale capture required expensive equipment, labor-intensive processes and an expansive transportation network. Banks had already invested in the paper payment processes, transportation, equipment, and information systems. Rather than reinvent or duplicate what banks could do, what corporations mainly wanted was to concentrate on making their own customer interactions and payment transactions easier for customers.

As one corporate treasurer said bluntly, “I’m not complicated. My goal with customers is to make it easy for them to give me money – any kind of money – fast and easy. My goal with banks? I just want availability – fast and cheap.”

But as new payment types, procedures and information providers proliferated – checks, cash, credit cards, debit cards, pinless, networks, cash-backs, stored value cards and so on – companies’ customer interactions grew more complex and more costly. Despite incremental process and service improvements (e.g., pay-by-phone, multi-functional devices for debit card pin pads and credit cards, check verification services, ARC, and so on), complexity and management effort nevertheless increased – both for banks and their corporate customers.

New payments types were mainly additive, rarely replacing a previous type. Each new type tended to come with its own set of processes, procedures, and staff – it’s own “silo” in the bank that each customer needed to work with. A returned check would have one set of rules and contact points, a returned ACH item another. Debit cards might have one level of fraud detection, checks another. Check information might be validated or fraud-protected by one external provider, credit card information by another provider. For corporations and their interactions with banks, things were moving in the wrong direction on the “fast and cheap” scale.

When Check 21 arrived on the scene (providing an alternative for checks to be converted to images), right behind ARC (accounts receivable conversion, providing for checks to be converted to ACH), suddenly the opportunity to breakdown the “silos” was available and corporate customers began to embrace that opportunity, in some cases even without significant encouragement from banks.

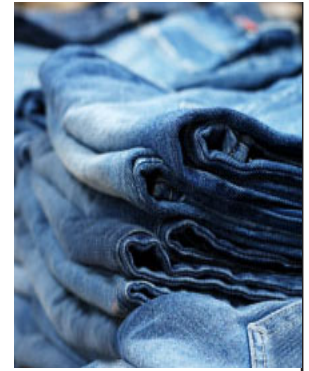


MY GOAL WITH CUSTOMERS IS TO MAKE IT EASY FOR THEM TO GIVE ME MONEY – ANY KIND OF MONEY – FAST AND EASY.

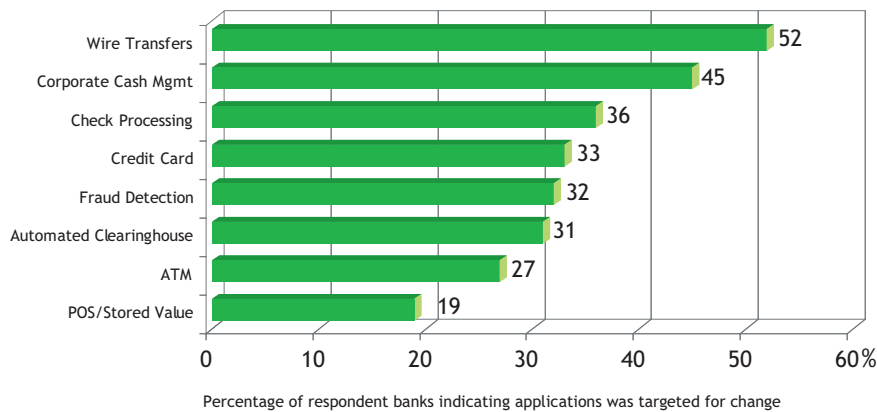


As corporations seized the opportunity, bankers could visualize their corporate customers saying, “Hmmm, we cash checks, we wire money, we give cash back. How much are my bank fees again?” And in fact a Deloitte study found, across the Treasury Management area, there continues to be year-over-year decline in treasury management services income for most banks.

Of course, many banks were already concentrating on adding value to their corporate customer relationships when Check 21 arrived. According to The Economist Intelligence Unit Survey of 2005 (see Figure 1), banks were significantly overhauling their cash management service offerings and technology.



**Figure 1 – Bank Application Changes**



Source: The Economist Intelligence Unit Survey, 2005

WHAT WOULD IT MEAN TO REPLICATE THE BRANCH EXPERIENCE IN WEB-BASED ARCHITECTURE ACCESSIBLE FROM ANY CUSTOMER LOCATION?

At first, the Check 21 buzz was mainly about the coming ability to exchange images between banks and out of archives. Check 21 would improve on the existing process by letting banks exchange images once they were captured in the normal course of check collection.

It took a few months for the exciting new reality to take shape in the market – for the market to recognize that Check 21 could help change the entire transactional process itself. While image exchange was held up by considerations of cost and standards, many banks and corporations saw that they could, at comparatively low costs – capture checks at customer sites. This appealed to many customers, who saw the opportunity to forego the cost of transporting the checks to the bank sites, to meet later deadlines, and to get better funds availability.

Banks also saw the advantages. Theoretically, at least, RDC erased geographic restraints on whose check business they could capture and process economically. And there were other intriguing possibilities. If customer intimacy is the prize in solidifying a bank’s customer relationships, what would it mean to basically extend the bank’s teller platform right out into the corporate customer’s office? What would it mean to replicate the branch



experience in Web-based architecture accessible from any customer location? How valuable would it be to enable a corporate customer to set its own operational timelines without the ramifications of bank-induced time constraints?

It was in this environment that we embarked on our survey. After months of helping our bank clients prepare their corporate customers for Check 21, the general outlines of the RDC opportunity were taking shape. The key variables of the RDC business case were beginning to emerge clearly, as *Figure 2* illustrates.

- Cash, for example: Cash-heavy organizations have local dependencies, thus often a weaker case for RDC.
- Payment types: Government agencies mainly paid by other government agencies with payments that are consistent and predictable likewise have a weaker case.
- Payment types: Retailers who must accept a variety of payment types from rushed consumers have an appreciably strengthened RDC case IF they accept large volumes of checks.
- Number of sites: There's a just-right range for number of capture sites. Too few sites or too many – both extremes diminish RDC value.



THERE'S A JUST-RIGHT RANGE FOR NUMBER OF CAPTURE SITES. TOO FEW SITES OR TOO MANY – BOTH EXTREMES DIMINISH RDC VALUE.

**Figure 2 – RDC Variables**

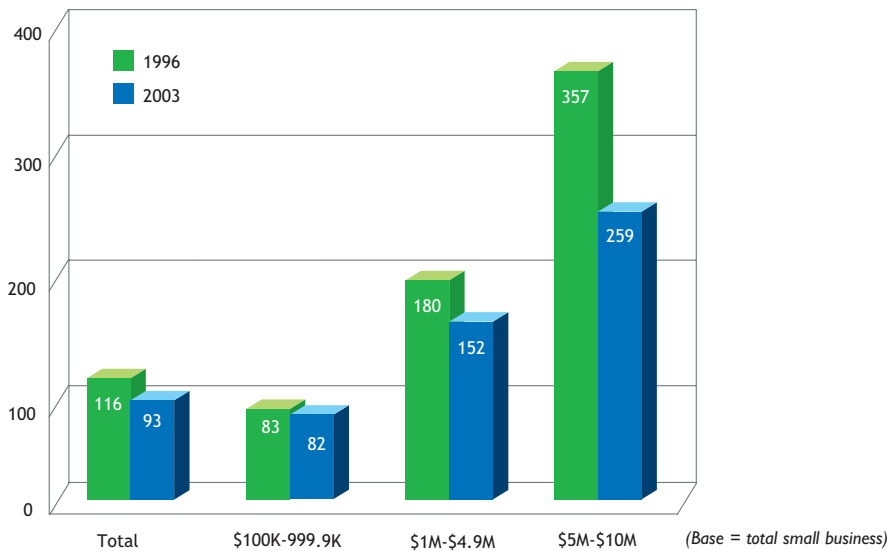
Value	HIGH	<p>Centralized high value, non-local clients:</p> <ul style="list-style-type: none"> <li>• Distributors</li> <li>• Medical services</li> <li>• In-house, non ARC lockbox, and other in-house pre-encoders</li> </ul>	<p>Multi-location, high value transaction, non-local payees:</p> <ul style="list-style-type: none"> <li>• Insurance</li> <li>• Brokerage</li> <li>• Correspondent banks</li> <li>• Auto dealerships</li> </ul>
	LOW	<p>Centralized, B2B businesses with low volume and local customers:</p> <ul style="list-style-type: none"> <li>• Wholesalers</li> <li>• Manufacturers</li> </ul>	<p>Decentralized, cash-heavy and low value transactions with local payees</p> <ul style="list-style-type: none"> <li>• Retailers</li> <li>• Grocery</li> <li>• Existing retail lockbox users</li> </ul>
		LOW	HIGH
		Cost to Achieve	

*Average Number of Checks Written Monthly by Annual Sales (1996 - 2003)*

As we prepared our survey, this finding (*Figure 3*) from Synergistics Research Corporation about one simple variable (average number of checks written per month in 1996 and in 2003) was particularly instructive, as it encouraged us to look underneath high-level conclusions to get to the diverging details.



Figure 3 – Synergistics Research on Number of Checks Written



As the chart shows:

- For the Small Business segment, checks written declined an appreciable 11 percent.
- But in the largest Small Business sub-segment, the decline was a precipitous 25 percent.
- Whereas in the sub-segment of Small Business with \$100,000 to just under \$1,000,000 in sales, there was virtually no decline. No doubt this segment is populated with small stores with more restricted technology alternatives and a high value for the convenience of payment acceptance.

This example demonstrates the importance of looking deeply to find relevant information for banks to develop products and for customers to determine the payment investments that are right for their business.

This set of insights and other client work formed the hypothesis of our research. Going into the research, we hypothesized that these characteristics would lead to a high-value business case for RDC:

1. Number of checks – the higher the better
2. Average value of checks – the higher the better
3. Cash – the less the better
4. Paying bank location – the more remote the better
5. Number of deposit accounts – the more the better
6. Number of check acceptance locations – the more the better
7. Business-to-personal checks ratio – the higher the better



## Our Survey

### Survey Goal

Accordingly, the goal of our survey was to clearly define the most telling business case variables for RDC, thus enabling banks and their customers to more rapidly identify and forecast the order of magnitude of value, customer by customer. We addressed these business case components:

- Potential improvements to workflows and staffing
- Potential improvements to cash management
- Profiles of candidate corporate customers
- Corporate customer requirements
- Cost to implement solution

We worked with our client banks to select a broad set of their corporate customers in order to achieve a broad cross-section of size, volume, industry, and financial products used. In some cases we used analytical data already prepared by the customer. For others, we performed in-depth, on-site analysis of the customer's operations, sometimes accompanied by staff from our client banks.

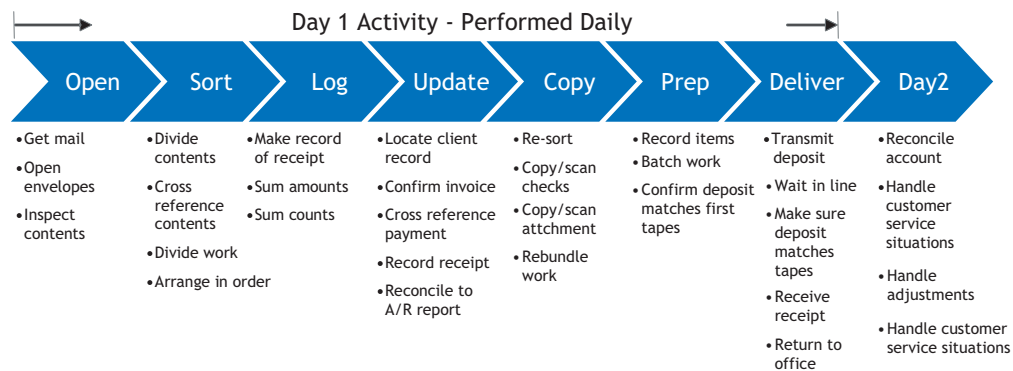
**It is important to note that this study focused on the value to be derived in the early part of the RDC process.** In the case of some customers of banks, this represents just the low hanging fruit. The largest value is often derived after the initial RDC enablement in subsequent projects when the customer begins to reengineer payment processes end-to-end.

### Workflow Mapping

We mapped each company's deposit-related operations to a standard workflow chart so that we could create a norm for comparison. We used those common activities to compare the business's current costs in the non-RDC environment to the likely costs in an RDC-enabled operation.

For that purpose, we devised this standard workflow chart (*Figure 4*) for their current (pre-RDC) operations, asking each respondent, for example, "What does 'Sort' mean in your workflow, how many people are involved, and how long does it take?"

Figure 4 – Current Operations Workflow



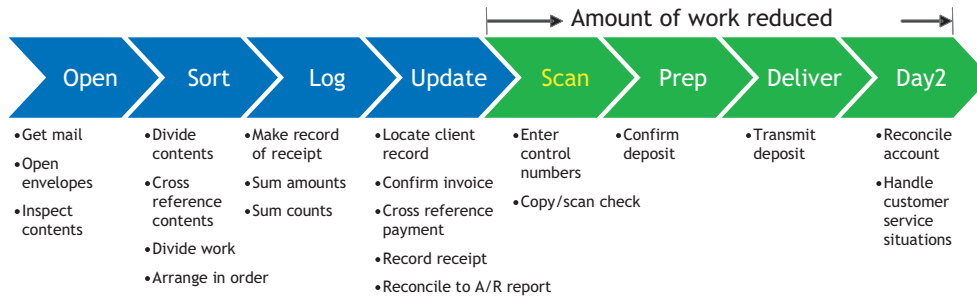
Then we assumed an image capture environment, and mapped their current operations to future RDC enabled operations. Here, there were two alternatives. Under the first alternative, called “Standalone,” the only improvement was use of the RDC solution.

The second alternative, called “Integrated,” was for companies with an automated receivables application, to which the RDC solution would be directly interfaced, giving the company greater potential for reducing or eliminating work (see Figure 5).

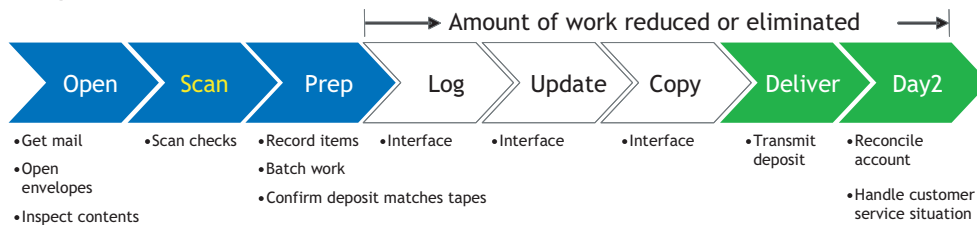


Figure 5 – Future Operations Workflow

**Stand-alone**



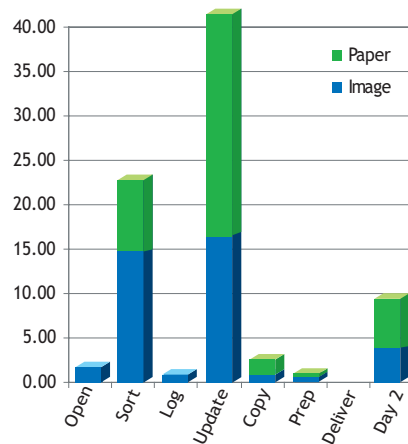
**Integrated**



**Sample Analysis Approach**

To illustrate our approach, in the sample analysis in Figure 6, we demonstrated that RDC would permit this particular survey respondent to reduce its work effort by 38 percent, with most of the savings coming from activities associated with updating, sorting, and Day 2.

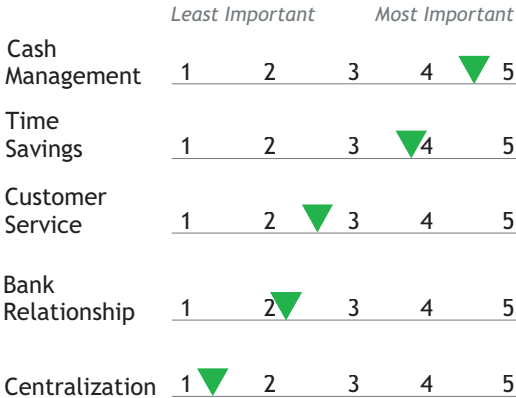
Figure 6 - Sample Analysis



We translated the improvements into financial benefits as follows: time saved at \$171,776, bank/carrier fee reduction of \$10,560, use of fund improvement \$11,130 (average daily holdover invested at long-term Treasury bond rate of 3.5 percent), additional costs (equipment, training, project roll-out, telecom, software) at \$5,000 – for a net yearly financial benefit of \$188,466.

While financial benefits powerfully influence a company’s RDC decision, they are not the only factor. Our research revealed that companies perceive the value of specific benefits quite differently, depending on a variety of strategic considerations. We asked our respondents to rate the relative importance of five potential RDC benefits as shown in Figure 7. The results demonstrate that the simplification and streamlining of cash management can be a business value that is more important to a corporate treasurer than the sheer dollars saved in execution of a process. Another example might be that the time savings provided to a business enabled that business to focus resources on more value added tasks, therefore the overall value delivered to the company was much greater than the cost savings from RDC.

Figure 7 – Importance of Potential RDC Benefits



OUR RESEARCH REVEALED THAT COMPANIES PERCEIVE THE VALUE OF SPECIFIC BENEFITS QUITE DIFFERENTLY, DEPENDING ON A VARIETY OF STRATEGIC CONSIDERATIONS.

## Survey Results

### RDC by Industry

We compiled our surveys by industry in order to generalize on the relative attractiveness of RDC to each industry (see Figure 8). Almost 90 percent of the insurance industry respondents found value in RDC (our low-value example in Figure 10 notwithstanding), an intuitive finding if you consider the characteristics of the typical insurance company: large number of paper payments, multiple locations, non-local payees, large transaction size, and minimal cash.

At the lower end of the scale were religious organizations – again an intuitive finding from the standpoint that churches tend to collect more cash, in smaller amounts, from mainly local sources and, not surprisingly, do not find many fraudulent checks in the weekly collection basket.



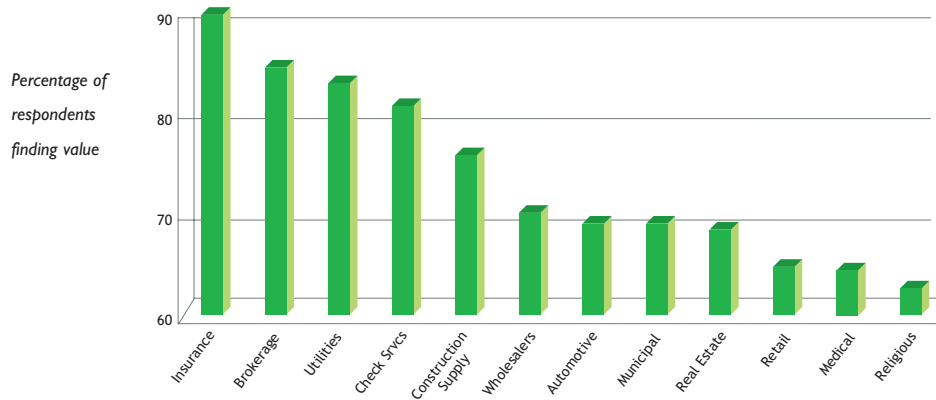
Interestingly, retail companies came in at the lower end of the scale, but in this case, we would cite the meaninglessness of the mean. Embedded in that 65 percent are retail companies, the widest of extremes: retailers that did not have compelling business cases due to their high priced inventory (jewelry, appliances, automotive) where payments were more than 60 percent electronic already and others with more attractive business cases due to high check ratios and local, well-known customer base (grocery, pharmacy, etc.). For one retailer, corporate capture was at an interesting tipping point. They had very few checks, but they were often very large and non-local. Therefore if the cost of the solution was between certain parameters, the business case worked. If a solution was not attainable within those parameters, there was not a business case.

One Corporate Treasurer of a publishing company for dozens of small town newspapers said, "Because of our distribution, I have to use twelve local banks in twelve different locations. To each of them, we look like and get treated as a much smaller account. If I can consolidate my deposits through remote capture, we will get the attention our size and scope deserve."



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**Figure 8 – RDC Value by Industry**

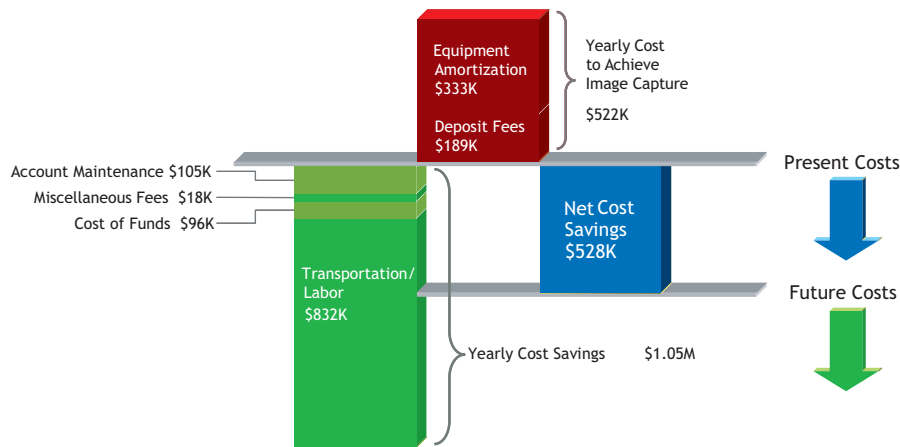


**High-Value Business Case Example**

Figure 9 illustrates the RDC business case for a large retailer – one of the largest business cases of our survey. This retailer, in the consumer electronics business, has about 1,000 locations over half of the United States and its payments are mainly checks and cards with higher dollar values. This retailer, we found, could save approximately \$528,000 annually by capturing images remotely. Because many of the locations are not near banks and the dollar value of the daily activity is high, secure transportation must be hired to pick-up deposits and drop them off at bank processing sites multiple times each day. In this case, the transportation savings was a major value driver as well as efficiency impact.



Figure 9 – High-Value Business Case



AT THE OPPOSITE END OF THE SCALE WAS A COMPANY IN THE INSURANCE BUSINESS – AN INDUSTRY WHICH ON THE WHOLE IS AN EXCELLENT RDC CANDIDATE.

We reached that conclusion by subtracting the new costs (of image capture equipment and deposit fees) from current costs (about \$1 million, mainly in labor and transportation).

(Underlying assumptions included the following: Average bank fee of \$7.50 for 1,000 location accounts and \$25 a month for primary shadow account at 50 banks; miscellaneous fees for reporting, concentration, ACH, and account reconciliation plus an average \$1.50 per transfer from the local banks to the primary bank; \$8 in labor and transportation for each deposit; six percent cost of funds; central reconciliation fee of \$0.75 per credit; \$1,000 source capture equipment cost for 1,000 locations, depreciated over three years; and no assumed funds availability improvement.)

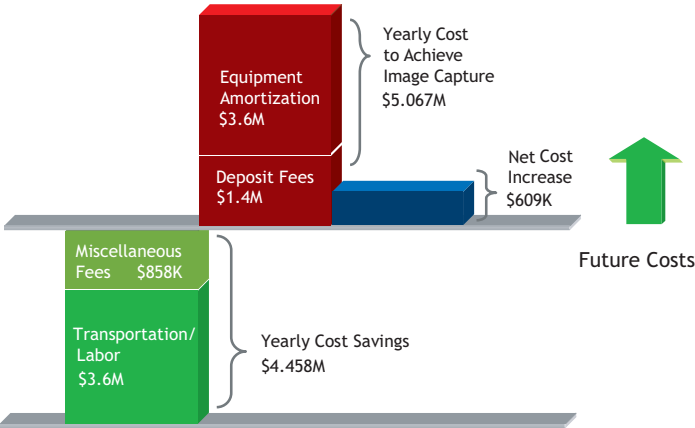
### Low-Value Business Case Example

At the opposite end of the scale was a company in the insurance business – an industry which on the whole is an excellent RDC candidate. Looking deeper, however, it emerged that this company maintains, in addition to their large in-house lockbox operation, an extraordinarily large network of storefronts for taking consumer payments AND that about 30 percent of storefront payments are made in cash. The business case was undercut by the need to equip so many small sites, the requirement to maintain transportation and local bank accounts to handle the large cash supplies.

As a result, our analysis showed that RDC would actually increase the company's costs by about \$609,000 over the first three years (See Figure 10). (Our underlying assumptions were identical to the previous example.) Once again, a reasonable high-level conclusion (that RDC is profitable for insurance companies) gave way to a different conclusion on deeper analysis at the specific company level.



Figure 10 – Low Value Business Case



CENTRALIZATION IS A NATURAL BY-PRODUCT OF RDC, AND THE NORMAL CENTRALIZATION BENEFITS ACCRUE TO RDC COMPANIES.

**Harder-to-Measure Benefits**

Besides the benefits we measured, it is worth noting other benefits that are difficult to measure.

From a cash manager’s standpoint: RDC typically allows consolidated deposits that in turn yield large balances. If the resulting “larger” relationship shifts from fee-based to analysis, the company would realize lower fees. They would also likely earn access to additional services such as image returns, controlled disbursements, positive pay, and ARP.

Many of our respondents, as quoted above, were pleased to note that RDC would earn them a better overall banking relationship. The consolidated deposits were enough to shift them from small business to middle market classification with the attendant relationship benefits, including an improved credit rating.

Centralization is a natural by-product of RDC, and the normal centralization benefits accrue to RDC companies: elimination of redundant, dispersed operations, and a single view of their balances and deposits.

Besides the time savings we used to calculate the financial benefits, there are other time savings benefits available to RDC companies. They can be more efficient in the remaining tasks, they can reduce their exception and error rates when they reduce data entry and re-keying, in turn reducing the time expended on resolving exceptions and errors. Eliminating trips to bank branches enables staff to concentrate on other time-sensitive tasks of reconciliation, adjustments, and customer service.

The customer service benefits were critical to a number of companies. For example, having an image available eliminated searching for filed copies, making copies for customers, and mailing or faxing copies. Along with the better service is the corresponding ability to serve more customers with no increase in staff.

**Concerns about RDC**

To be balanced, we also asked customers who did not currently have RDC what their concerns might be around implementing an RDC solution. While respondents rated their

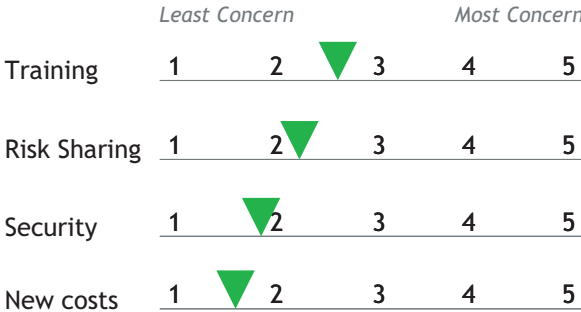


RDC concerns (See Figure 11) much lower than they rated the perceived benefits, a review of their concerns is instructive for companies considering the RDC business case.

The training category rated highest, with concerns encompassing ease of use, proper check handling, device servicing and customer education. In the risk sharing category were concerns about image quality, indemnity, warranties, and credit checks for financial liability for deposit errors. In the category of security, they expressed concerns about data security and fraud. As the overall industry attention around fraud prevention and protection of customer data continues to increase, we expect that this will become a more realistic concern that may increase requirements for RDC solution functionality. Lastly, despite concerns about new costs, it was no surprise that respondents largely expected a short payback period.



Figure 11



**Common Requirements**

Our respondents were largely united on the features and functions they expected of an RDC program. In the required category, they placed the ability to:

- Scan checks of various sizes (consumer and business)
- Display checks in grouping by deposit transaction
- Capture OCR check information (maker name, address, courtesy amount, MICR content)
- Balance deposit to totals
- Create virtual deposit tickets
- Transmit deposits and acknowledge receipt

Desirable features and functions included:

- Easy-to-use interface
- Quality and reliable customer service
- Low cost of ownership
- Interface to accounts receivable
- Clear differentiation from lockbox and corporate ARC

At some point, improved availability schedules



## Conclusion

The overwhelming conclusion of our survey is two-fold:

1. RDC holds tremendous potential for companies and their banks, but the size of the opportunity ranges widely based on some specific variables of a business's profile. This study demonstrates a point of view on the initial value to be gained by a corporate customer of a bank. There are many additional value opportunities that flow from this first step.
2. With insufficient analysis, it is easy to build a business case that is logical, compelling, and wrong. More than many technology advances, RDC requires detailed analysis at macro organizational levels (bank relationships, use of funds) coupled with depth of analysis at a micro level (store transaction mix, locations, solution costs, etc.).

For each company, the challenge is to understand the detailed dynamics of its own payments business and, more challenging, to predict the ongoing behavior of its customers. They must have a perspective of their business profile and value expectations in order to evaluate the RDC alternatives from its banks or other service providers. It means keeping pace with technology advances so that the company can enjoy the cost savings and growth opportunities that the payment industry transformation is beginning to deliver.

Corporate treasurers must regularly ask themselves these questions, and their bankers can help them find the right answers:

- Are we investing sufficiently in electronic payment solutions?
- Does our bank offer these types of cash management solutions?
- Are we renegotiating cash management services with our banks?
- Are we tuned into customers' changing expectations about payments?
- Do we have or anticipate special globalization needs in payments?
- Are our receivables and disbursements costs in line?
- Are we getting valuable and timely payment-related information?
- Do we need more industry-tailored or even company-tailored services?
- Should we be getting earlier availability?
- Do we need to better integrate our operations with our bank solutions?

Answers to questions like these will ensure that companies adopt the payments solutions that are best fitted for their unique business needs, rather than assume that one size fits all.

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