

BigHand Dictate and Speech Recognition Return on Investment Whitepaper

Dated: 14 March 2018
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Contents

| | |
|--|----|
| 1. Introduction | 3 |
| 2. Gathering Results..... | 3 |
| 3. BigHand Attorney Survey | 4 |
| Attorney Survey Results Summary | 4 |
| Additional Attorney Billable Revenue..... | 5 |
| Additional Billable Revenue by Firm Size..... | 6 |
| 4. BigHand Legal Assistant Survey | 6 |
| Legal Assistant Survey Results Summary..... | 7 |
| Legal Assistant Salary Savings Breakdown..... | 8 |
| Legal Assistant Salary Savings by Firm Size..... | 8 |
| 5. Combined Value Analysis..... | 9 |
| 6. Return on Investment Analysis..... | 11 |
| BigHand Dictate | 11 |
| BigHand Dictate and BigHand Speech Recognition | 12 |
| 7. Client References | 13 |
| 8. About BigHand | 13 |

1. Introduction

Driven by increased scrutiny around billable hours, proliferation of fixed-fee arrangements and the growth of alternative legal solution providers, law firms are searching for and implementing new ways to make the day-to-day delivery of legal services more streamlined and efficient to remain competitive and increase profitability. Truly innovative firms seek out new technology to support this effort, including tools that make essential back-office functions more cost effective today, and can support business growth for the future.

Voice technologies such as digital dictation, often coupled with speech recognition, are recognized as powerful efficiency tools. When accompanied with intelligent work routing and powerful analytics (all easily accessible with a laptop or mobile device anywhere in the world), it's understandable why many firms strongly advocate these solutions and encourage their staff to use them.

Although the benefits of voice technology are clear and logical to most, it can be difficult to validate efficiency without real numbers to others. This often makes it hard for IT or Operations staff to build a viable business case for investment.

This paper analyzes the return on investment (ROI) for two BigHand solutions that have been developed to simplify the dictation and document production process for law firms and increase the efficiency of both attorneys and support staff. The solutions are BigHand Dictate and BigHand Speech Recognition. BigHand Dictate is a digital dictation solution that enables authors to capture and delegate work as a voice file and track progress on the go on their mobile device. BigHand Speech Recognition, is a digital voice-to-text transcription solution that reduces the administrative time for legal assistants when converting dictations into high-quality legal documents. Together, these solutions digitize the transfer of work from author to assistant, optimize all available resources regardless of location, increase visibility of workloads and allow for complete organization and centralization of support teams.

2. Gathering Results

BigHand conducted two client surveys in December, 2017. To increase the accuracy of the results, participants were instructed to use the general metric of a "one-page document" in both surveys. The answers to time-focused questions (i.e. "On average, how long does it take you to...") were requested in minutes, with no upper or lower entry limits.

The first survey gathered data on the time savings achieved by attorneys using BigHand Dictate compared with self-typing documents. The second gathered data on the time savings realized by legal assistants' proof-reading text transcribed by BigHand Speech Recognition versus manually transcribing the dictations. Both surveys asked if participants thought the BigHand tools helped make them more efficient and if they would recommend the technology to a friend or colleague.

All savings calculated in this paper are based on a seven-hour work day, a 22-day day work month and a 251-day work year. All cost savings are calculated using annual salary costs only and do not include the cost to employers of additional benefit such as healthcare, pensions or any taxes. Please consider that should additional benefit load be included into the calculation, savings will increase much further.

While many lawyers feedback that the access to BigHand Dictate from their mobile device, provides a significant opportunity to increase billable hours by making them more productive while away from the office, no consideration was given to this as part of the analysis. The only consideration was to hard time and cost savings driven by the tools themselves.

Additional billable hour revenue is calculated assuming a very conservative view that just 25% of Attorney time saved converts into billable hours, and that billable hours are charged at \$425 per hour.

All cost savings related to legal assistants detailed in this paper are calculated using an average legal secretary salary of \$49,500 a year / \$23.80 an hour, as reported by the Bureau of Labor Statistics for the United States, 2016. Be aware that areas where legal secretaries garner higher salaries, such as in Washington, D.C. (\$70,590/year or \$33.94 an hour), New York (\$62,680/year or \$30.14 an hour) and Los Angeles (\$55,590/year or \$26.72 an hour)¹, will experience greater savings.

3. BigHand Attorney Survey

BigHand Dictate is a digital dictation solution offered on Enterprise (behind the client firewall) and Cloud (hosted) platforms for law firms of all sizes. BigHand Dictate has been voted the number one digital dictation solution in the US in both the 2016 and 2017 ITLA Technology surveys.

BigHand Dictate enables attorneys to get more done by using their voice to dictate the content of documents, such as letters, memos or emails. By using either a handheld recorder with a desktop application, or the BigHand Go app on a mobile phone or tablet, attorneys can record, submit and track dictated tasks anytime, anywhere. Once in the BigHand system, dictations are intelligently routed to the best resource for processing, whether it be to a specific secretary, secretarial pool, outsourced support team, or the speech recognition platform for automatic transcription. From the point of submission, all dictations can be monitored and reported on.

In November 2017, BigHand sent a survey to BigHand Dictate using attorneys and gathered 126 unique participant responses.

Attorney Survey Results Summary

Survey participants reported that using BigHand Dictate saves them between 0 and 55 minutes of typing time per document. The average time savings reported was 12 minutes per document. When multiplied by the average number of documents created (or requested) per attorney, per day (seven) this equates to 351 hours, or 50 full working days per attorney, per year. The average additional revenue for a firm, based on 25% of the extra billable hours converting into charged billable hours is \$37,400 per attorney.

Of the 126 participants, 97.6% said that they believe that dictation technology makes them more efficient and 90.5% said they would recommend BigHand's dictation technology to a friend or colleague

¹ <https://www.bls.gov/oes/current/oes232011.htm>

It was found that on average, attorney respondents create (or request) seven new documents per day. Without using BigHand Dictate, each document takes an average of 19 minutes to type manually. Creating the same document using BigHand Dictate reduces the time it takes by an average of 63% to only seven minutes. In total, it was found that BigHand Dictate saves attorneys an average of one hour and 24 minutes of typing time per day, which equates to 351 hours, or 50 full working days of additional time per user, per year.

Based on the average billable hour being charged at \$425, and assuming conservatively that 25% of the attorney's saved time will convert into billable hours, it's assumed that BigHand Dictate can generate \$37,400 of additional revenue per attorney, per year.

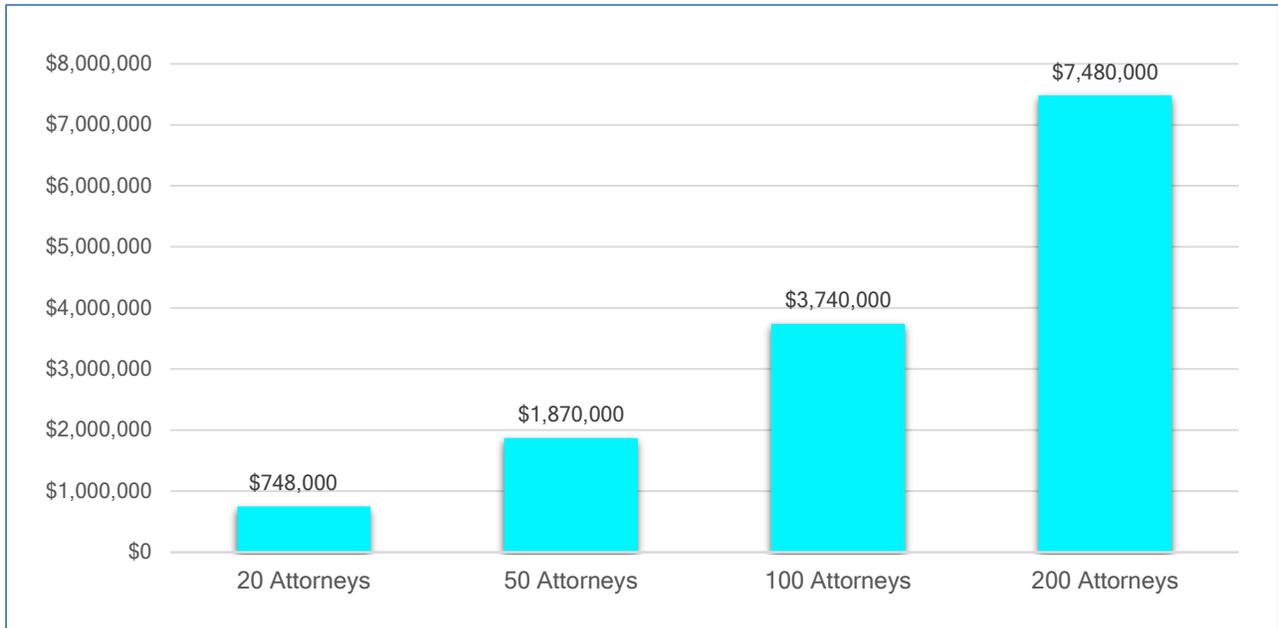
Additional Attorney Billable Revenue

(All data in this section refers to time and additional revenue gains per single BigHand Dictate Attorney user, per year)

| Time Saving Per Document (in minutes) | Number of hours saved per month (22 working days) | Number of additional billable hours per year | Number of additional billable hours per year that convert into revenue (25%) | Additional annual revenue per attorney (charged at \$425 p/h): |
|---------------------------------------|---|--|--|--|
| 5 | 13 | 146 | 37 | \$15,725 |
| 12 (Average result) | 31 | 351 | 88 | \$37,400 |
| 20 | 51 | 586 | 147 | \$62,475 |
| 30 | 77 | 879 | 220 | \$93,500 |

Additional Billable Revenue by Firm Size

(All data in this section refers to the average additional billable revenue achievable per firm, per year based on the number of BigHand Dictate users)



4. BigHand Legal Assistant Survey

BigHand Dictate and Speech Recognition integrate seamlessly to offer significant efficiency benefits for users. By automatically converting dictated voice files into text with an average of 97% accuracy, BigHand Speech Recognition removes much of the administrative work traditionally associated with legal document production.

BigHand Speech Recognition enables authors to work in a more self-sufficient way, without necessarily needing the support of an assistant to generate high-quality documents, quickly. For support teams, BigHand Speech Recognition lifts the burden of mundane transcription work allowing them more time for higher-value, client-facing tasks.

In December 2017, BigHand sent a survey to legal assistants who have the experience of manually transcribing dictations as well as proof-reading text transcribed by the BigHand Speech Recognition platform. Participants were asked how many documents they're requested to produce per day and how long they estimated a document would take them to proof-read versus typing manually from scratch. They were also asked to estimate the length of a "one-page document" dictation in minutes.

In December 2017, BigHand sent a survey to BigHand Speech Recognition legal assistant users and collected 73 unique participant responses.

Legal Assistant Survey Results Summary

It was found that on average, a one-page document equates to six minutes of recording time. On average, each six-minute dictation takes 14 minutes to transcribe from scratch whereas if a legal assistant is only required to proof read the text returned already transcribed from speech recognition, the administrative time is reduced to 9 minutes. With this data, the following conclusions can be drawn.

- **It takes an assistants 2.3 times the length of a dictation to manually transcribe its contents**
- **It takes a legal assistants 1.5 times the length of a dictation to proof read its contents when returned from speech recognition**
- **Speech recognition allows assistants to convert dictations into finished content 36% more efficiently than manually typing**

Survey participants reported that BigHand Speech Recognition saves them between 0 and 40 minutes of transcription time per document. The average time savings reported was five minutes per document. When multiplied by the average number of documents created per assistant, per day (nine) this equates to 188 hours, or 27 working days per assistant, per year. The value of this time savings, based on the average legal assistant salary in the US is \$4,474.40 per year.

Of the 73 participants, 69.9% said that they believe that BigHand Speech Recognition increases their work capacity. 79.5% of participants said that they would recommend BigHand's dictation technology to a friend or colleague.

It was found that on average, legal assistant respondents create nine new documents per day. Without using BigHand Speech Recognition, each document takes an average of 14 minutes to type manually. Proof-reading the same document content once it's been transcribed by BigHand Speech Recognition reduces the time to create the document by an average of 36% to only nine minutes. In total, it was found that BigHand Speech Recognition saves an average of 45 minutes of transcription time per day, which equates to 188 hours, or 27 working days per legal assistant, per year. The value of this time savings, based on the average legal assistant salary in the US is \$4,474.40 per year.

Legal Assistant Salary Savings Breakdown

(This data refers to time and cost savings per single BigHand Speech Recognition user, per year)

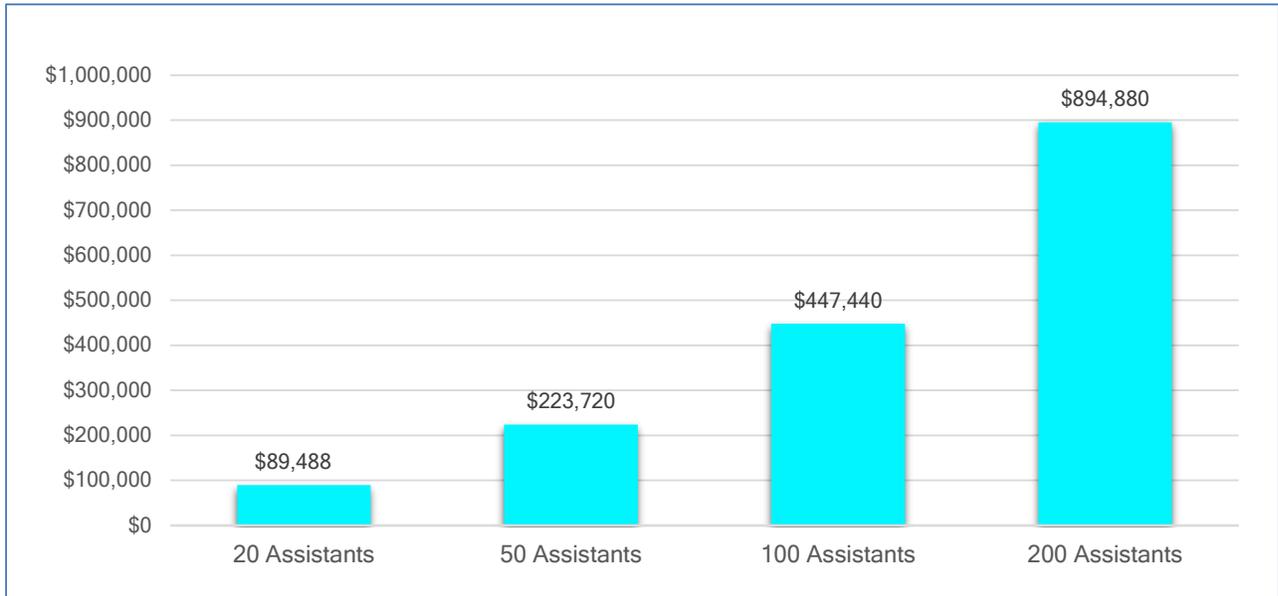
Cost savings by region

| Time Saving Per Document (in minutes) | Number of hours saved per month (22 working days) | Number of working days saved per year (251 working days) | Annual cost savings per single Legal Assistant BigHand Speech Recognition user based on average: | | | |
|---------------------------------------|---|--|--|--|---|--|
| | | | North American annual legal assistant salary: \$49,500 (\$23.80 per hour) | Los Angeles annual legal assistant salary: \$55,590 (\$26.72 per hour) | New York annual legal assistant salary: \$62,680 (\$30.14 per hour) | Washington D.C. annual legal assistant salary: \$70,590 (\$33.94 per hour) |
| 5 (Average result) | 17 | 27 | \$4,474.40 | \$5,023.36 | \$5,666.32 | \$6,380.72 |
| 9 | 30 | 48 | \$8,044.40 | \$9,031.36 | \$10,187.32 | \$11,471.72 |
| 15 | 48 | 81 | \$13,447.00 | \$15,096.80 | \$17,029.10 | \$19,176.10 |
| 20 | 66 | 108 | \$17,921.40 | \$20,120.16 | \$22,695.42 | \$25,556.82 |
| 30 | 99 | 161 | \$26,894.00 | \$30,193.60 | \$34,058.20 | \$38,352.20 |

Legal Assistant Salary Savings by Firm Size

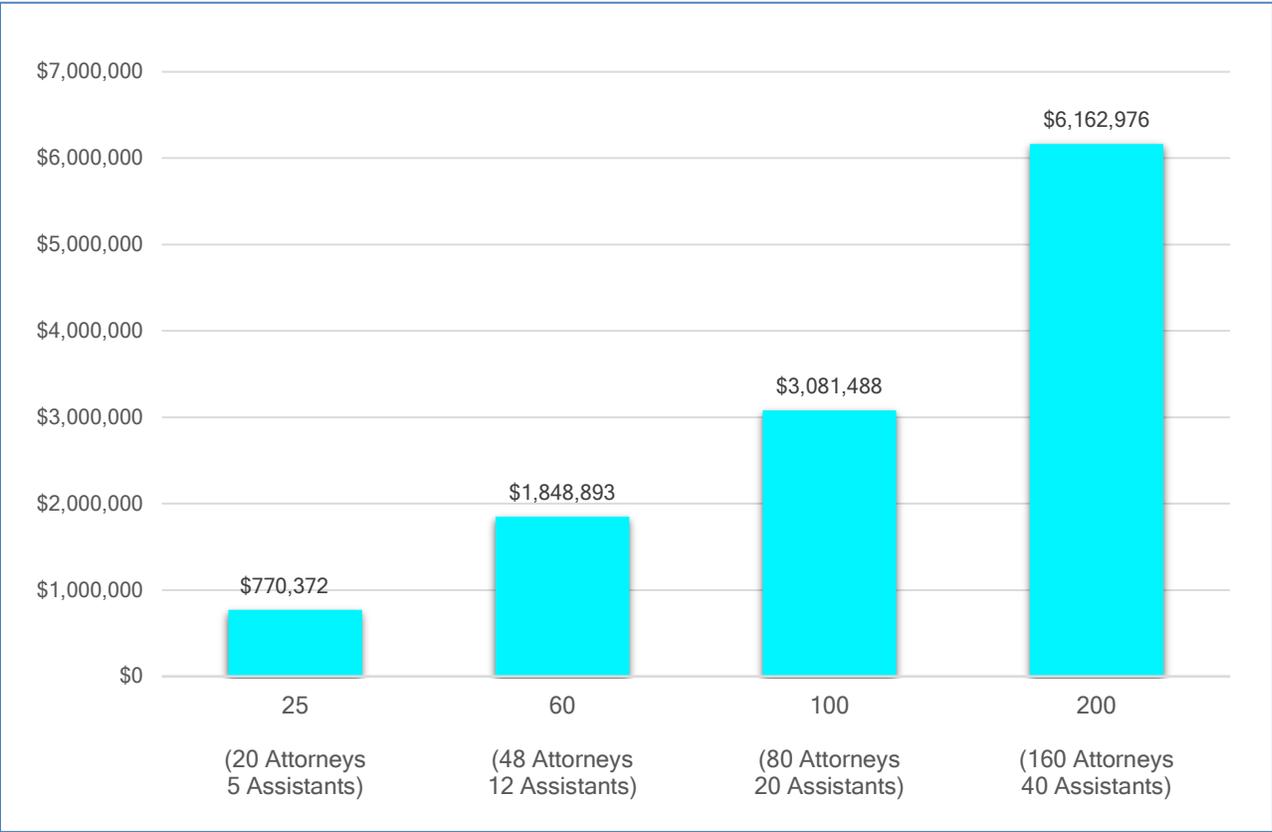
(This data refers to the annual cost savings achievable per firm, based on the number of BigHand Speech Recognition users)

Average Salary savings



5. Combined Value Analysis

The data in this section refers to the annual additional billable revenue combined with salary savings achievable per firm, based on the number of attorney and legal assistant BigHand Dictate and Speech Recognition users. All examples in this section are calculated using an attorney to assistant ratio of 4:1.

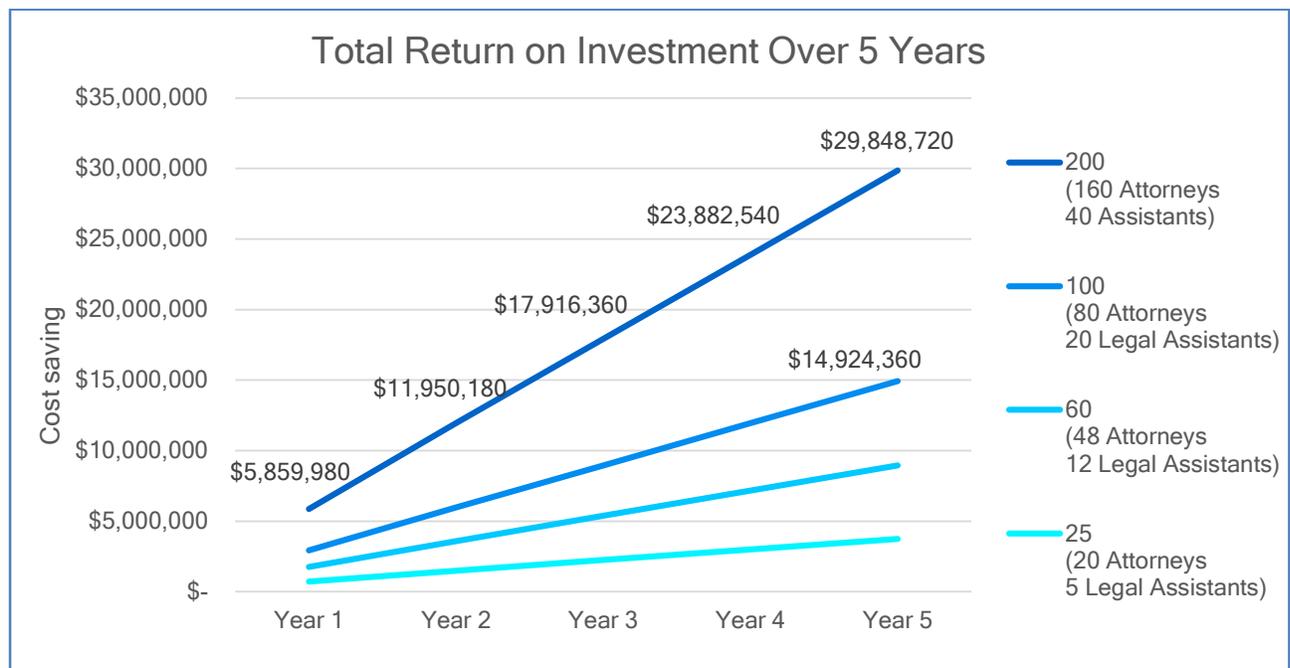


6. Return on Investment Analysis

BigHand Dictate and BigHand Speech Recognition can be purchased as individual modules on a per user basis. Users must have a BigHand Dictate license to utilize a BigHand Speech Recognition license. In all instances, both the attorney and legal assistant must have a BigHand Dictate license. When BigHand Speech Recognition is added to the solution, only attorneys (authors) are required to have a BigHand Speech Recognition license. Initial and ongoing costs are incorporated into the ROI analyses.

BigHand Dictate

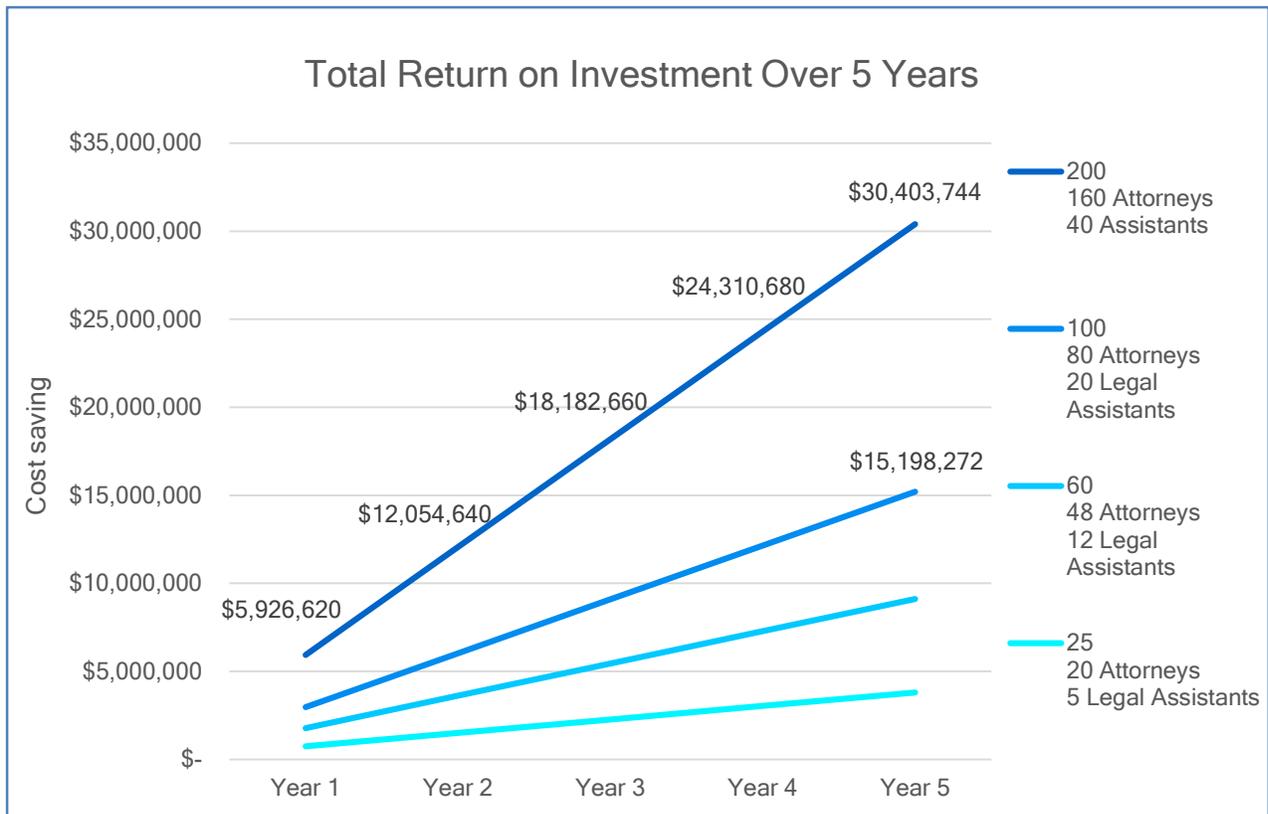
This graph shows the total additional value that can be achieved over five years when attorneys use BigHand Dictate. This is the total additional billable revenue achievable by attorneys using BigHand Dictate, minus the associated software costs (one-off implementation and user license fees, plus the recurring Annual Maintenance and Support (AMS) costs over five years.)



| | 25 (20 Attorneys 5 Legal Assistants) | 60 (48 Attorneys 12 Legal Assistants) | 100 (80 Attorneys 20 Legal Assistants) | 200 (160 Attorneys 40 Assistants) |
|--------|--|---|--|---|
| Year 1 | \$726,198 | \$1,752,954 | \$2,926,390 | \$5,859,980 |
| Year 2 | \$1,493,773 | \$3,585,054 | \$5,966,180 | \$11,950,180 |
| Year 3 | \$2,239,545 | \$5,374,908 | \$8,958,180 | \$17,916,360 |
| Year 4 | \$2,985,318 | \$7,164,762 | \$11,941,270 | \$23,882,540 |
| Year 5 | \$3,731,090 | \$8,954,616 | \$14,924,360 | \$29,848,720 |

BigHand Dictate and BigHand Speech Recognition

This graph shows the total additional value that can be achieved over five years using BigHand Dictate and BigHand Speech Recognition. This is a calculation of the additional billable income achievable by attorneys, as well as the salary cost savings of legal assistants, minus the associated software costs (one-off implementation and user license fees, plus the recurring Annual Maintenance and Support (AMS) costs over five years.)



| | 25 (20 Attorneys 5 Legal Assistants) | 60 (48 Attorneys 12 Legal Assistants) | 100 (80 Attorneys 20 Legal Assistants) | 200 (160 Attorneys 40 Assistants) |
|--------|--|---|--|---|
| Year 1 | \$734,528 | \$1,772,946 | \$2,959,710 | \$5,926,620 |
| Year 2 | \$1,500,530 | \$3,611,352 | \$6,023,720 | \$12,054,640 |
| Year 3 | \$2,266,533 | \$5,449,758 | \$9,087,730 | \$18,182,660 |
| Year 4 | \$3,032,535 | \$7,288,164 | \$12,151,740 | \$24,310,680 |
| Year 5 | \$3,794,168 | \$9,116,083 | \$15,198,272 | \$30,403,744 |

7. Client References

"BigHand is an instrumental part of how our firm is using technology to achieve greater efficiencies and profitability. Solutions like BigHand have a real advantage in the changing legal industry because as firms struggle to meet the demands of a changing marketplace, all of a sudden, technology solutions like this become essential to maintain and improve profitability."

Jay Courie, Managing Partner, McAngus Goudelock and Courie

"BigHand is a rock-solid product. BigHand is great for all sizes of firms as you don't need to have an IT team to manage it. We are very happy with the technology."

Dennis Marano, Firm Administrator, Borgelt, Powell, Peterson & Frauen

"The most notable change is the assistant time saved on the task of transcribing. According to my samplings, BigHand has reduced the time an assistant spends on creating a document from dictation by 50%, and in some cases up to around 75%"

Adam-Howden Duke, Partner, Guild Yule LLP

"Since we've implemented BigHand, we've cut our transcription time in half, which frees up our support staff to work on other important tasks."

Jason Thomas, Chief Technology Officer, Cole, Scott & Kissane, P.A.

"BigHand is a total workflow solution. It allows us to be much more productive - even when an assistant is out of the office we can simply reassign work to someone else. BigHand Speech Recognition is saving our secretaries so much time - and it continues to get better all the time!"

Cheryl Davis, Office Administrator, Bradley & Gmelich LLP

8. About BigHand

Established in 1996, BigHand currently has over 545,000 software licenses in use across 3,000 global organizations and the number grows daily. BigHand is based in Chicago, Eindhoven, London, Sydney, Temecula and Toronto. In addition to document creation and formatting tools, BigHand also offers speech, workflow, mobility and metadata management software applications; giving professionals proven business applications that enable them to increase operational efficiencies and reduce overhead costs.

BigHand Dictate has been voted as the number one digital dictation solution in US according to the 2016 and 2017 ILTA Technology Surveys. BigHand Create has also been voted as the number one macro / template solution in the US according to the 2017 ILTA Technology Survey.

BigHand's Voice, Delegation and Improve product suites are HIPAA compliant to protect the privacy and security of protected health information (PHI) as defined in the HITECH Act. BigHand is ISO27001 certified.

For more information visit bighand.com, email inquiry@bighand.com or call +1 (951) 506 5641.