

AI<sup>2</sup>ROI<sup>®</sup>

# Delivering Business Value With Automation and Cognitive AI





## Enterprise adoption of Artificial Intelligence (AI) technologies

continues at an exponential pace, with all signs and signals pointing to accelerated investment within just the next few years.

IDC predicts that global spending on AI systems — covering a wide range of automation, cognitive AI and virtual agent solutions — could reach more than \$77 billion by 2022. The [McKinsey Global Institute](#) estimates that in 60 percent of occupations, at least one-third of all activities could potentially be automated. [Gartner](#), meanwhile, believes that one-quarter of all digital workers will be using some kind of conversational virtual assistant by 2021, with industries such as financial services and insurance already showing great interest.

Still, even with all of these predictions of continued AI growth and expansion, many enterprises still face a fundamental question:

### *What kind of Return on Investment (ROI) can I expect from AI?*

It can be a complicated question, one that is very much dependent on where an individual company is with its journey, experience and maturity with AI technologies, and on what kind of business value a company wants to achieve.

Broadly speaking, enterprises fall into one of three larger groups when it comes to AI deployments:

- **No investment:** Companies that are at the very beginning of their AI projects and investments, with little to no insight on which business processes or use cases should be tackled first, and with unclear ROI expectations.
- **Initial investments:** Businesses that have limited Robotic Process Automation (RPA) or automation investments that are delivering some restricted ROI, with a goal of achieving end-to-end automation across several processes, and move to cognitive technologies once ROI is more clearly defined.
- **Continuing investments:** Companies that have deployed automation and cognitive technologies and are looking to build on previous ROI in areas such as IT support or customer service or, possibly, improve on lackluster deployments that failed to deliver anticipated value.



With literally hundreds of AI-related vendors and solutions from which to choose, it's not surprising that many enterprises are confused or unsure about how to take the first steps toward answering the ROI question. This hesitation, however, has not stopped enterprises from pursuing AI for strategic gain, mostly due to the success that other companies have already achieved with their automation or cognitive AI projects. In one [Deloitte](#) survey, 83% of respondents reported realizing either moderate or substantial benefits from their work with AI technologies.

AI projects — given the amount of time, effort and resources that they require — cannot be viewed as “nice-to-have” initiatives that might deliver incremental or undefinable returns. Whether a project is directed at internal employees and stakeholders or external customers and audiences, each needs to have a measurable and transformative impact on a business, gauged either by cost savings, operational improvements, productivity enhancements, customer service advancements or other metrics in order to deliver business value.

The good news is that as the AI market matures, an emerging number of companies are developing and deploying use cases that are delivering ROI across several dimensions. These examples provide guideposts and best practices for how businesses still looking to push out of the starting gate can plot their plan to use AI for real, bottom-line ROI.

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**It's part of what we at IPsoft see an emerging trend among enterprises that sits at the core of their AI projects and deployments: AI2ROI.**

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In this white paper, we'll explore this AI2ROI trend in more depth. We'll provide some insights into how companies can measure AI2ROI (and they're not all solely cost-related), and detail some AI use cases among major global brands that are already delivering AI2ROI to those companies.



## Measuring AI2ROI Success: Cost Savings and Beyond

To fully account for AI2ROI across a business, leaders must think both practically and creatively. With an AI project (or any IT initiative), there's a natural inclination to emphasize cost and operational savings, and those will remain as part of any due diligence prior to and during an AI implementation. As a baseline, we see IPsoft clients implementing automation and cognitive technologies with an expectation of shaving one-third of their operational costs within the first year (depending on the scope of the deployment and use case), either through process improvements, improved services efficiencies, and/or redirecting employees away from operational or maintenance roles to revenue-generating tasks.

However, other returns are just as important in order to present a holistic picture of AI's value to any organization. As detailed in Everest Group's recent [research](#), "Conversing with AI — Intelligent Virtual Agents (IVA) Market Report 2019," enterprises have adopted AI most often for IT, helpdesk and contact center use cases. In these scenarios, enterprises are measuring AI2ROI using familiar metrics, but ones that are not directly tied to costs. For example, in contact centers, digital workers (or digital colleagues as we often call them) that are used to answer customers' support queries are measured against standard call center metrics that apply to voice interactions around efficiency and satisfaction, as seen below.

### Call Center Metrics



#### Response Time

How quickly a digital worker responds to customer queries



#### Average Handle Time

The time spent messaging with a client in one session



#### First Contact Resolution

Ability of a digital worker to resolve an issue during the first interaction



#### Customer Satisfaction

How satisfied the customer was with the interaction and whether their issue was resolved



#### Escalations

The number of times a digital worker was unable to answer a question and transferred the query to a human agent

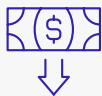
However, these kinds of metrics can be adapted for any kind of use case, beyond call centers. Companies that are successful in achieving AI2ROI think more strategically, with a combination of financial, productivity, customer experience and innovation metrics that can be applied to any project, as detailed on the following page.

## How Automation and Digital Workers Generate AI2ROI



### **Scaled Services → Scaled Revenue**

Digital workers allow users to independently execute processes from end-to-end 24/7. This ubiquity permits customers to purchase goods and services inside or outside of regular business hours, without ever being forced to wait in a queue for service. Digital workers can instantly scale to meet customer demand and drive additional revenue.



### **Optimized Processes → Reduced Overhead**

Enterprises can leverage automation to optimize IT and business processes end-to-end, and utilize digital workers for executing on cognitive tasks and transactions. AI can be implemented all along a value chain and allow companies to remove human “middleware” and reinvest those resources in other parts of the business.



### **Improved User Experience → Improved Brand**

With interactive digital workers assisting consumers and users with their questions, requests and transactions in real-time and at scale, companies can generate trust in their brand and services — leading to repeat customers who can recommend the brand to others.



### **Employees Freed from Rote Tasks → More Creative Business Solutions**

Automation can take rote tasks out of humans’ hands, and digital workers can handle higher-level tasks in a human-like manner, but by no means do these technologies make human employees obsolete. In fact, with digital workers automating high-volume tasks, companies can direct and reskill employees for new roles that emphasize human creativity and problem solving. This can spark innovative thinking around new products and services.



### **Machine Learning → A Learning Lifecycle**

With machine learning, digital workers improve at tasks over time, and can learn and be trained on new ones. This creates a learning lifecycle where the business value delivered by digital workers can grow exponentially with each passing month and year. AI2ROI increases the longer a digital worker is on the job.



Many AI early adopters have changed the way they measure their AI implementations as they gain experience with various technologies. Others have started to measure AI2ROI in ways that are unique to their vertical industry, depending on their strategic and competitive goals, while others have discovered new kinds of business value, almost by accident.

For example, a leading gaming company implemented [Amelia](#), IPsoft's digital colleague, for customer service and account verification. The business found that average handle times for agent-led customer service calls went up following Amelia's deployment. This was an unexpected development, as the company expected Amelia would help keep human agent-led handle times in check, thus reducing overall costs and call volume.

However, the gaming company found that with Amelia handling calls dealing with simple requests, calls with human agents became higher-value interactions with extended customer conversations. In the long run, the business was able to build

stronger customer relationships, and by default longer-term customer loyalty and additional revenue opportunities, with Amelia as its front-line support agent.

Another slightly unexpected benefit for the gaming company was Amelia's skill at rooting out potential phishers trying to gain fraudulent access to gamers' accounts. With Amelia providing bulletproof account verification, the business was able to improve its own security and compliance procedures — a point that wasn't on the company's original plan for AI2ROI.

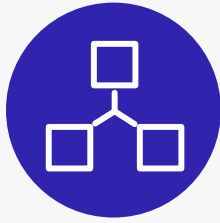
In addition to new metrics emerging, AI2ROI will become simpler to measure once enterprises and employees gain experience with implementing, training and using automation and cognitive technology. The more widely an AI solution or service is used by employees and customers, the greater the benefits for the enterprise. No matter what particular metrics a company sets for their use case or AI project, three key factors can help businesses ensure that AI2ROI is achieved, as detailed on the following page.





### Adoption

A solution should be relevant to a large user base, whether customers or employees. A larger number of users will ensure a far-reaching impact on efficiency and productivity.



### Scalability

A cognitive digital worker or automation platform should be able to learn and complete as many tasks as possible, with high accuracy and resolution rates.

While an implementation may start small, a solution that can be expanded to resolve additional issues or processes across departments will set the business up for long-term savings and value.



### Autonomy

Any true AI solution needs to be able to take action and resolve issues to some degree without human input, as long as it has been trained on processes and given permissions to do so.

Productivity will be significantly improved if a digital worker or automation platform can take on tasks that were previously completed by humans or make processes simpler.

One IPsoft client, a leading British telecommunications company, realized AI2ROI by focusing on these three factors. The company implemented Amelia as the first line of employee IT support in seven of its markets on 36 use cases, including support ticket remediation and Outlook troubleshooting (**Adoption**).

The eventual aim is to provide all employees with access to Amelia, and to expand beyond IT to other areas such as HR (**Scalability**).

Currently for IT support, Amelia handles 40,000 chats in multiple languages, achieves an intent recognition of 97% for the tasks on which she has been trained and completes 50% of tasks without human intervention, with a goal to reach 65-70% (**Autonomy**).

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## Global Brands Achieving AI2ROI

As the AI market continues to evolve, the path to AI2ROI among enterprises will become clearer, partly as the result of more companies watching what their peers and competitors are achieving with AI (as shown below), and attempting to recreate their successes. AI2ROI has relevance for companies across various industries, regardless of company size or the audiences they serve.

### Allstate

The Allstate Corporation is the largest publicly held personal lines property and casualty insurer in the United States, serving more than 16 million households. In September 2017, Allstate deployed Amelia as a whisper agent at its call center to reduce call times while increasing customer satisfaction. While on the phone with customers, human agents interact with Amelia through a chat interface, where she leads them step-by-step through a variety of procedures such as coverage-change, proof-of-insurance and reinstatement requests.

### Amelia as a Whisper Agent

**250,000**

Amelia averages **250,000+** conversations monthly

**75%**

**75% of inquiries are handled on the first call**, compared with 67% previously

**4.2 minutes**

Average call duration has been reduced **from 4.6 minutes to 4.2 minutes**

Amelia is currently trained on more than 50 unique industry-specific topics, which allows her to quickly answer customer questions and provide personalized policy information when required via secure integrations with Allstate's back-end systems. Since she was first deployed, average call duration has been reduced from 4.6 to 4.2 minutes — and that translates into a substantial increase in total productivity when you consider the thousands of calls handled each day. In addition, 75% of inquiries are solved during the first call with Amelia, up from 67% previously.

By offloading policy information and procedures to Amelia, the training time for new agents has also been greatly reduced. Amelia also ensures that agents comply with state and federal industry regulations, as she can be updated when laws and procedures change. Since she was hired as a whisper agent, Amelia has assisted Allstate employees on millions of customer interactions, averaging 250,000 per month. Future plans from Allstate include increasing Amelia's workload and expanding her scope to eventually interact directly with agents and customers to solve issues often too complex for a single human.



## EHL

As stated above, companies should not be solely focused on cost savings and revenue generation as the primary measurements of achievement with an AI project. For some organizations, including educational institutions and non-profits, improved services, and access and delivery of those services, is on equal or higher footing than strict financial metrics.

The world-renowned Swiss-based hospitality school Ecole Hôtelière de Lausanne (EHL) has developed three instances for Amelia to automate specific IT and administrative tasks. However, just as importantly, the school has integrated Amelia's development into its educational mission so students can utilize cognitive AI throughout their careers.

## Amelia as an IT Service Desk Agent and Student Concierge

**100%**

Amelia's intent  
**recognition is 100%**

**500**

Amelia assists  
**500 users per  
month** with Wi-Fi  
access

**24/7**

**Amelia is available  
24/7** to answer  
student questions

Amelia was first put to work for the school to grant guest Wi-Fi access. The previous automated system was complex and problematic, involving passwords sent via SMS. When the school held large events such as its twice-a-year job fair featuring more than 400 companies, the IT team had to assign a specific employee to solely address the queue of guests attempting to navigate the existing Wi-Fi system. Now the process has been automated and optimized via Amelia. In a related use case, she also helps students regain access to their accounts via a SSO on their PCs or through a physical kiosk at the front of the service desk office.

In Amelia's most complex undertaking for the school, she takes on the role of virtual admissions agent. In this instance, Amelia lives on the school's website and assists prospective or future students with answering more than 200 questions through her industry-leading Natural Language Interface. In the event that Amelia doesn't know an answer, she connects the student with an appropriate and available regional human agent.

With Amelia achieving 100% intent recognition and handling hundreds of requests each month in these use cases, school leaders are receiving massively positive feedback from students, prospective students, staff and IT personnel, who can turn their attention away from repetitive service requests and toward improving IT and technical services overall.

## BNP

BNP Paribas is one of the world's largest banks by total assets, with a business footprint that spans 72 countries and a legacy that extends back more than a century. BNP Paribas Securities Services is a wholly-owned subsidiary of the BNP Paribas Group and is a multi-asset servicing specialist supporting the complete investment cycle on behalf of institutional clients.

### Amelia as a Customer Service Agent

**1 million**

Provides customer service for a site that receives more than **1 million visitors**

**86%**

Amelia recognizes intent on **86% of chats**

**27**

Amelia is **trained in 27 skills** for Securities Services customers

The bank wanted to add cognitive and automation functionality to its client-facing operations in order to remain competitive within the financial sector. BNP Paribas Securities Services tapped Amelia (known as “NOA” or “NextGen Online Assistant”) to automate tasks inside two client-facing websites.

Beginning in 2017, Securities Services began working with IPsoft to develop NOA for the company's NeoLink and PlanetShares web portals. NeoLink provides access to subscribed services for all client segments. In this use case, NOA will provide information to institutional clients (in several languages) regarding the settlement of trades. NOA provides secure on-demand access to information, but also proactively suggests actions she can take on their behalf to resolve issues. For example, if a problem is identified with a specific trade, NOA will lead a user through the process of re-submitting the trade with updated information.

PlanetShares is a client portal that allows companies to manage employees' global compensation and benefit plans as well as employee-facing benefit self-management tools. NOA guides shareholders through exercise options and provides up-to-date information regarding funds from sales. An initial pilot was developed to provide secure personalized information access regarding clients' fully registered shares. The pilot was trained on 27 industry-specific skills and quickly achieved 86% accuracy on intent recognition.

In both instances, NOA will enhance the client experience with 24/7 on-demand access to information and services. These implementations also offer secondary benefits by automating high-volume client needs, which frees experienced support staff to focus on complex or higher-value tasks.



## The Time for AI2ROI is Now

It's understandable why companies maintain a healthy skepticism about AI's ability to deliver real ROI and business value — in fact, it's a pattern that the technology industry has seen play out countless times before. Through the years, many wondered whether the first computers, or the Internet, or PCs, or networked systems, or mobile phones, or enterprise applications, etc. would have a positive and material impact on business. Indeed, just a few short years ago, many companies balked at the idea of using non-private/public clouds for any corporate software and systems due to security and manageability concerns; now utilizing public clouds is all but a fait accompli for many businesses because of the potential cost-savings and efficiencies.

The same type of acceptance is slowly but steadily emerging with automation and cognitive technologies, primarily due to the AI2ROI successes that are taking hold around the world, and secondarily because undue anxiety about AI completely replacing the need for human workers is cresting, if not starting to abate.

AI2ROI is real and achievable. Regardless of whether your company is at the start of its journey with AI technologies, or already far down the road, there is a great opportunity to develop and deploy use cases utilizing automation and digital workers for AI2ROI. Focus on areas of the business that could benefit most from AI technologies. Include metrics other than those that are cost-related as part of the conversation. And finally, be bold — consider ways that AI can truly transform your business. You may end up with returns and benefits you never considered possible before.

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**IPsoft** is the world leader in Enterprise AI and the home of Amelia, the industry's most-human digital AI colleague. Amelia's ability to learn, interact and improve over time makes her the market's only AI that can fully understand user needs and intentions.

**Contact us at** [ipsoft.com/contact](https://ipsoft.com/contact).

