Deep Analysis

INNOVATION INDEX

2020
Research is core to our work, and in 2020 the Deep Analysis team took more than 200 briefings; we talked with companies ranging from multi-billion-dollar megavendors to tiny start-ups, and we talked to enterprises to understand their needs and experiences. Every so often, in our vendor briefings, our client work, and our desk research, we had a “shut the front door!” moment where we saw something innovative and exciting.

And so, as we approach the end of this “memorable” year, we thought we would look back and share some of those moments with you. This report features an eclectic bunch of companies that are not likely to be seen together in the same context again. Each does something different, something innovative that moves the needle, something that has the potential to improve, educate, and stimulate the information and process automation management industry as a whole. At the core of their inclusion is their ability to reframe, rethink, and reinvent.

Without further ado, let’s reveal who made it onto this year’s Deep Analysis Innovation Index!
Figure 1
The 2020 Deep Analysis Innovation Index
The Vendors

ABBYY Timeline

What it does
In basic terms, Timeline extracts and reads the time stamps and details of any events that occur throughout a business process. It then visually models that data to reveal any irregularities. This system can be used to observe, optimize, and remediate processes – and process instances – in flight. Where things get particularly interesting is in Timeline’s ability to run that information through machine learning modules to predict and forecast future outcomes. In other words, Timeline automates the analysis of the “as is” environment and can predict an improved “to be” environment.

Why we included ABBYY Timeline in the 2020 Innovation Index
Applying AI to complex business process activities makes sense, as the insights, predictions, and improvements that can be gleaned from analyzing the associated data are invaluable. No matter how well designed and managed they are, business processes are often unpredictable and can vary widely from the expected or planned process path. The use of AI in process automation is widely talked about yet rarely carried out, but ABBYY Timeline is an early phase example that highlights an effective use of AI in the automation and process management world today.

Adobe Liquid Mode

What it does
Liquid Mode, and more broadly Adobe Sensei, strikes a balance of maintaining a locked document’s integrity while simultaneously improving the user’s experience. Via the API, developers can move beyond concentrating on traditional content services and focus instead on expanding and improving the experience of those working with the document itself. Traditional capture/OCR solutions have not been good at extracting complex data, and developers may use Sensei to support improved content processing in downstream applications such as contract lifecycle management (CLM) and enterprise resource planning (ERP).

Why we included Adobe Liquid Mode in the 2020 Innovation Index
To date, the focus of document and content management has been in securing/locking files and ensuring they are filed away and labeled correctly for later retrieval. Though the user interface experience of document management systems has improved notably, the end user’s experience with the document itself has not. Sensei and Liquid Mode attempt to right that balance. Liquid Mode is a small feature, but it will have a big impact.

You can read our ABBYY Timeline report here: https://www.deep-analysis.net/vendor-vignette/ABYY-timeline-process-mining-analyst-report/

You can read our Adobe Liquid Mode report here: https://www.deep-analysis.net/vendor-vignette/adobe-liquid-mode/
Alkymi Data Inbox

What it does
Alkymi targets its Data Inbox offering at use cases within the financial services market, specifically addressing the unstructured data buried inside the large, complex documents common within the industry. Data Inbox offers an easy-to-use application that intercepts documents arriving via email or its REST API, or those residing in a content repository, and utilizes AI powered by machine learning to convert unstructured data into actionable and structured business data.

Why we included Alkymi in the 2020 Innovation Index
Alkymi’s approach attacks high-value complex documents. Rather than view the entire document as a single entity containing a consistent extractable structure, its unique approach, using computer vision, looks for different complex structures such as text, tables, and charts and classifies them individually. This allows a document to fall into multiple classifications, which in turn allows different views of the same information to be rendered appropriately for different user constituencies. Alkymi has taken a measured approach by targeting a highly specialized use case and refining Data Inbox using feedback from customers and partners alike.

You can read our Alkymi report here: https://www.deep-analysis.net/vendor-vignette/alkymi/

Amazon Textract

What it does
Amazon describes its machine learning (ML) technology stack as a three-layer cake. At the bottom is a layer for advanced practitioners to work with deep learning frameworks such as Tensorflow or Pytorch. The next layer is for developers to work with Amazon SageMaker to build out managed ML capabilities. The top layer provides pre-built artificial intelligence (AI) services that can be used immediately via an API integration point. Textract is one of these AI services offered by AWS. In simple terms, Textract provides data extraction from scanned documents. It does this by delivering ML-based optical character recognition (OCR) tools to read the document and accurately extract data and text.

Why we included Amazon Textract in the 2020 Innovation Index
Textract may be one small piece of a big Amazon pie, but it is a pivotal piece and one that has shaken the traditional document capture market. Textract is a catalyst for information management buyers and vendors to leverage AWS as a true platform rather than simply as a provider of cloud storage. Though it’s labeled as OCR, even a cursory look at Textract makes it clear that this is a fully-fledged content extraction tool, one designed to provide the data necessary for further automation.

You can read our Amazon Textract report here: https://www.deep-analysis.net/vendor-vignette/amazon-aws-textract-analyst-report/
### Attestiv

**What it does**

In principle, what Attestiv provides is an application and platform to capture and validate images and videos in insurance workflows. It does this by recording files at the point of capture on a blockchain; for example, photographs of an asset (such as a vehicle) at the time it is insured or at the time of damage and a related claim. Though simple in concept, the provision of a mobile app for adjusters to capture and lock digital media is new in the industry.

**Why we included Attestiv in the 2020 Innovation Index**

Blockchain has the potential to underpin many business applications in the future, but as of today there are few practical applications on the market, even though the underlying blockchain global infrastructure is immense and offers many variations and options. Attestiv in this regard is ahead of the curve, but more importantly the company has focused in on a specific industry vertical rather than taking the path of many start-ups that try to “boil the ocean.” Attestiv is a small and focused product, but it has the potential to make a big impact in the insurance sector.


### BurstIQ

**What it does**

BurstIQ is a data exchange network that leverages blockchain technology to build secure data solutions, creating identity profiles by using big data. The profiles are then used in applications, which for BurstIQ primarily focus on the healthcare sector, though the technology is still generally applicable to other data and industries. BurstIQ’s goal is to build a global network for specific and true ownership of data, exchange the data at scale, and find deep connections within the data. Its secret sauce is to store virtually all data (except for images) on-chain rather than on- and off-chain combined and to use proprietary machine learning algorithms and techniques to create individual identity profiles from among the disparate blockchain data.

**Why we included BurstIQ in the 2020 Innovation Index**

Machine learning and big data analytics are not typically thought of in conjunction with secure enterprise blockchains. In fact, at first blush these appear somewhat in conflict as machine learning mines sensitive data at scale while healthcare blockchains provide security and decentralization. It is worth noting that we don’t see the big boys as having capabilities like BurstIQ’s at this time. The bottom line here is that there should be no shortage of early adopters and firms with relevant innovative business models able to build on a BurstIQ PaaS to extend standard enterprise blockchain security and data analytics capabilities.

→ You can read our BurstIQ report here: [https://www.deep-analysis.net/vendor-vignette/burstiq/](https://www.deep-analysis.net/vendor-vignette/burstiq/)
Collabware

What it does
Most record management (RM) products on the market only concern themselves with categorizing and applying retention schedules to content. But Collabware’s Collabspace goes much further by applying a data lake approach to provide full content management and search functionality wherever the content resides. In simpler terms, all of the data (information) in the data lake is analyzed and processed via the machine learning capabilities. New values are extracted from that content and, once added, are also stored in the data lake. This provides a rich body of active and automatically updated content to mine. Overall, Collabspace provides a holistic RM system with the added value of a built-in archive, backup, and recovery system.

Why we included Collabware in the 2020 Innovation Index
Innovation comes in many different forms. What Collabware brings to the table is a sensible and practical method for managing content both in place and by leveraging a data lake approach. However, the company today has little visibility in the market, and its ambitious plan to rethink governance and RM flies beneath the radar. Without a doubt, though, this novel approach to enterprise content management has broad applicability beyond the current target markets that Collabware has focused on.

You can read our Collabware report here: https://www.deep-analysis.net/vendor-vignette/collabware-analyst-report/

Grooper

What it does
Grooper describes itself as a data science and data integration platform that comes with pre-installed machine learning capabilities. At first glance that would seem to put Grooper in competition with the likes of Boomi, Informatica, and MuleSoft. But a second look at the Grooper offering reveals something quite different. For where traditional data integration platforms focus on structured data, Grooper’s approach is to recognize, capture, and analyze both structured and unstructured data in documents and forms. That is ambitious for a small company, and positions it, in theory at least, into some of the most complex data collection and integration challenges imaginable.

Why we included Grooper in the 2020 Innovation Index
Grooper represents one of the more remarkable corporate and technology pivots we have seen. A company that was well known and long established in the capture/scanning market reinvents itself as a data integration platform vendor. What it has done so far – and it has taken seven years of development work – it has done well. The vision and recognition of the need for a system such as Grooper that embraces rather than tries to ignore the tricky topic of unstructured information is well founded.

You can read our Grooper report here: https://www.deep-analysis.net/vendor-vignette/grooper-ai-classification-analyst-report/
Hyland Credentials

What it does

Hyland Credentials provides an underlying platform to credential documentation. This platform is built on an open source standard designed jointly with MIT called Blockcerts. Blockcerts is not a protocol or a software application, but a method for anchoring and verifying records using any blockchain. Hyland Credentials provides a well-designed and relatively easy-to-use document credentialing system, one that has taken into account the practicalities of privacy and even the need to revoke documents on occasion. It is already used by some of Hyland’s existing higher education customers and has the potential to be much more widely used moving forward.

Why we included Hyland Credentials in the 2020 Innovation Index

Hyland gets credit for making the first major moves by a content management company into the blockchain world, and this move will likely spur its competitors to respond. Moreover, it is a practical and simple application of highly complex technology to meet real-world needs in higher education and government environments.


IBM Automation Document Processing

What it does

IBM’s Automation Document Processing brings the capabilities of cognitive capture to its well-established FileNet Content Manager and IBM Enterprise Records Manager content repositories. These repositories will benefit significantly from the increased visibility of the information contained within the documents processed and subsequently stored on them. This integration will extend to other parts of the IBM portfolio, including its BPM and (newly acquired) RPA offerings.

Why we included IBM in the 2020 Innovation Index

IBM did not merely focus on delivering a technology platform – it examined the operational deployment of this technology. Automation Document Processing includes several pre-trained AI-based algorithms enabling data extraction from various document types in different vertical industries. This decision should accelerate adoption and reduce implementation times.

→ You can read our IBM report here: https://www.deep-analysis.net/ai-behemoth-ibm-enters-the-cognitive-capture-market/
**IPwe**

**What it does**

IPwe has built a platform and set of services that centrally locate, verify, and analyze patents; in essence, it is a prototype global patent ecosystem. This is done via the use of blockchain and artificial intelligence (AI). In simple terms, IPwe crawls national patent registries, normalizes the data, and centralizes all the patents and associated activities into a central platform database. (IPwe currently claims to have 80% of the world’s patents on its system.)

**Why we included IPwe in the 2020 Innovation Index**

Though it is still early, it is hard not to be impressed by the progress and ambition of IPwe. What struck us most is that the company has leveraged both AI and blockchain in an attempt to transform a traditional and slow-moving sector and create a revolutionary new trading marketplace. The global IP and patent markets are huge but massively underleveraged and ripe for disruption.

→ You can read our IPwe report here: [https://www.deep-analysis.net/vendor-vignette/analyst-report-review-of-ipwe/](https://www.deep-analysis.net/vendor-vignette/analyst-report-review-of-ipwe/)

---

**Microsoft Syntex**

**What it does**

The Syntex release focuses on modernizing and improving the Microsoft SharePoint platform and, more specifically, users’ experiences on it. To achieve that aim, Microsoft has added intelligent content services (machine teaching) to SharePoint to enhance knowledge discovery, provide workplace insights, and power content processing along with expertise location. Or to put it another way, to connect people with knowledge, experts, and insights.

**Why we included Microsoft Syntex in the 2020 Innovation Index**

Syntex is one of Microsoft’s most important enterprise announcements in a long time, if for no other reason than that it adds much-needed intelligence to SharePoint. SharePoint users have been frustrated by how manual and cumbersome the system can be to manage, often becoming little more than another form of file server. Automating the enrichment and management of SharePoint content (and that of other Microsoft applications) with Syntex, along with a slew of new features, represents a major shift for the massive SharePoint community.

→ You can read our Microsoft Syntex report here: [https://www.deep-analysis.net/vendor-vignette/sharepoint-syntex/](https://www.deep-analysis.net/vendor-vignette/sharepoint-syntex/)
**Nuxeo Insight**

**What it does**
Nuxeo has built a set of tools and applications, enhanced by its own machine learning (ML) models, to meet specific enterprise content and digital asset business needs. Those needs include automated extraction, enrichment, classification, and indexing across a range of information assets from standard documents to images and videos. In simple terms, Nuxeo uses established third-party technologies to undertake commonplace activities such as optical character recognition (OCR), speech to text, and some basic classifications. It layers on its own ML models to undertake more granular analysis, with the end result being specific customer “bots” to meet specific customer needs, trained on the customer’s data.

**Why we included Nuxeo Insight in the 2020 Innovation Index**
Nuxeo Insight has gone further than most in bridging the gap between highly trained data scientists and non-technical business users, making it one of the more effective and useful AI systems for content analysis that we have seen. Moreover, it has taken strides toward making its system auditable, transparent, and understandable. The firm claims that “anyone” can use this system, and though that may be a bit of a stretch, it is undoubtedly one of the most usable systems we have seen to date.

>You can read our Nuxeo Insight report here: https://www.deep-analysis.net/vendor-vignette/nuxeo-insight-ai-analyst-report/.

**Oracle Track and Trace**

**What it does**
Oracle Intelligent Track and Trace is a business application that employs blockchain technology (based on Oracle’s Blockchain Platform and using Hyperledger Fabric) and sits within Oracle’s Supply Chain Management portfolio. It is used to improve the tracking and tracing of goods in shipment as part of broader supply chain management and logistics operations. It can ingest business transactions and events from supply chain, ERP, and IoT applications to provide end-to-end transaction-level and item/product-level traceability. It is designed for business users managing complex day-to-day interagency supply chain networks.

**Why we included Oracle Track and Trace in the 2020 Innovation Index**
Oracle is trying to flip the switch from consulting-led enterprise blockchain to pre-assembled, plug-and-play enterprise blockchain. To date, too many projects have been consulting-led, lengthy, and costly. Oracle sees blockchain as an infrastructure platform component that should be easy to access and utilize. This approach should enable developers to quickly build and provision everything from complex smart contracts to basic records management.

Ripcord

What it does

Ripcord’s technology combines hardware (robotics) and software to capture and process paper documentation. The hardware units (called workcells) remove staples and move documents to the scanner bed, where they are captured by optical character recognition (OCR) software. The resulting digital capture (a full-color PDF) is then indexed and uploaded to Ripcord Canopy, its cloud-based (Amazon AWS) records management system. In short, on one level Ripcord does everything a document scanning bureau service would do but with fewer humans involved in the tasks, and on another level it adds capture and records management to the mix and mirrors what a business process outsourcing service might offer.

Why we included Ripcord in the 2020 Innovation Index

In terms of innovation, Ripcord checks all the boxes, combining robotics with cloud software for capture. Ripcord represents a step forward in the capture, archiving, and records management world: its speed in capturing and processing paper documents sets a new benchmark.


Salesforce Work.com

What it does

Work.com provides good planning and communication tools and addresses the need – in a world of disrupted and distributed workers – for the system to work for both employees and the employer. Its Employee Workspace, Concierge, and Wellness applications together provide a mobile-friendly, alternative intranet experience. For example, employees can search for and find answers to questions relating to HR and workplace safety, or have recommendations pushed to them through the use of the underlying AI. This will be expanded to IT support and other areas in the coming year.

Why we included Salesforce Work.com in the 2020 Innovation Index

The coronavirus pandemic has turned the world upside down. Though some organizations will return to the same workplace situation they had previously, others will be changed forever. However the return is managed, we now know that few organizations, if any, were prepared for the upheaval that we are still undergoing. A unified platform for upheaval now and potentially in the future makes a lot of sense, and the fact that Salesforce pulled this together so thoroughly and quickly is impressive.

You can read our Salesforce Work.com report here: [https://www.deep-analysis.net/vendor-vignette/salesforce-work-com/](https://www.deep-analysis.net/vendor-vignette/salesforce-work-com/)
Methodology

Good enterprise software makes the user feel highly skilled. It offers a great sense of accomplishment because users can do things easily that were difficult or impossible before. Furthermore, good enterprise software has layers of depth that entice advanced users to explore further and discover new powers to make themselves more productive.

For enterprise software to be effective, it has to meet high-quality requirements and appeal to a specific and valued audience. Of course, beyond that, people’s preferences are going to come down to taste. Therefore, inclusion in this year’s index is not an endorsement as such, nor is it a recommendation to buy this or that product or service. You have to find the right technology to meet your specific needs. Instead, we are acknowledging that each of these organizations is doing something different and innovative to move the information and automation enterprise software sector forward.

To drill down on the four criteria we use for the index, and indeed in every assessment of a technology product or service, here is what we look for:

Solves Problems
Is this product able to provide a solution to difficult, costly, or complex issues?

Applies Ingenuity
Is this an effective application of a novel solution to meet existing requirements, unarticulated needs, or new needs?

Adds Value
Does this product have the ability to enhance and add value for one or more groups (employees, customers, partners, etc.)?

Shows Flexibility
Does it have the ability to change according to need or environment?

From day one, our goal at Deep Analysis has been to do things differently. Having run research and advised clients at major analyst firms, we didn’t want to build more of the same. We wanted something better. We have applied this to our criteria and to the Innovation Index itself.
→ We do not take into consideration a vendor’s revenue or number of employees.

→ We do not present spreadsheets for the vendors to fill in.

→ It does not matter if the vendor is a client of Deep Analysis or not.

The Innovation Index is, thus, structured but entirely subjective – but then, innovation is subjective. And rather than trying to identify “leaders” or undertake side-by-side technical evaluations, we are simply looking to showcase something positive when we see it.

Finally, it is important to note that there were other products that impressed us this year but didn’t make it onto the Innovation Index as they did not satisfy at least three of the criteria. Notably, a number of firms have done great and fast work to pull together effective business applications to help firms manage their operations during a pandemic and the return-to-the-workplace planning to come. Most notably, we saw Appian, Hyland, and Salesforce make great strides in this regard.

In summary, not every product in the Innovation Index met all four criteria, but all excelled in at least three.

What We Are Looking for in 2021

In 2021 our criteria remain the same, as we know many firms out there are making a difference and pushing the boundaries. The world has been in geopolitical, economic, and pandemic-related upheaval in 2020, and workforce and business needs have changed forever. Once stable and standard means of working, and their associated business applications, have been caught short and unable to adapt. We expect a lot of adaptation and rethinking to come to the fore in the year ahead, through the use of AI and blockchain but also, sometimes, by using traditional technologies differently to meet changing needs.

At Deep Analysis, our door is always open for all technology vendors in the information and process automation management markets, and we will continue to watch for those “wow” moments and write them up whether you are a client or not. So, if you have a product in one of these markets and think you are up for the challenge, let us know!
About Deep Analysis

Deep Analysis is an advisory firm that helps organizations understand and address the challenges of innovative and disruptive technologies in the enterprise software marketplace.

Its work is built on decades of experience in advising and consulting to global technology firms large and small, from SAP, Oracle, and HP to countless start-ups.

Led by Alan Pelz-Sharpe, the firm focuses on Information Management and the business application of Cloud, Artificial Intelligence, and Blockchain. Deep Analysis recently published the book "Practical Artificial Intelligence: An Enterprise Playbook," co-authored by Alan and Kashyap Kompella, outlining strategies for organizations to avoid pitfalls and successfully deploy AI.

Deep Analysis works with technology vendors to improve their understanding and provide actionable guidance on current and future market opportunities.

Yet, unlike traditional analyst firms, Deep Analysis takes a buyer-centric approach to its research and understands real-world buyer and market needs versus the “echo chamber” of the technology industry.

Contact us:
info@deep-analysis.net
+1 978 877 7915