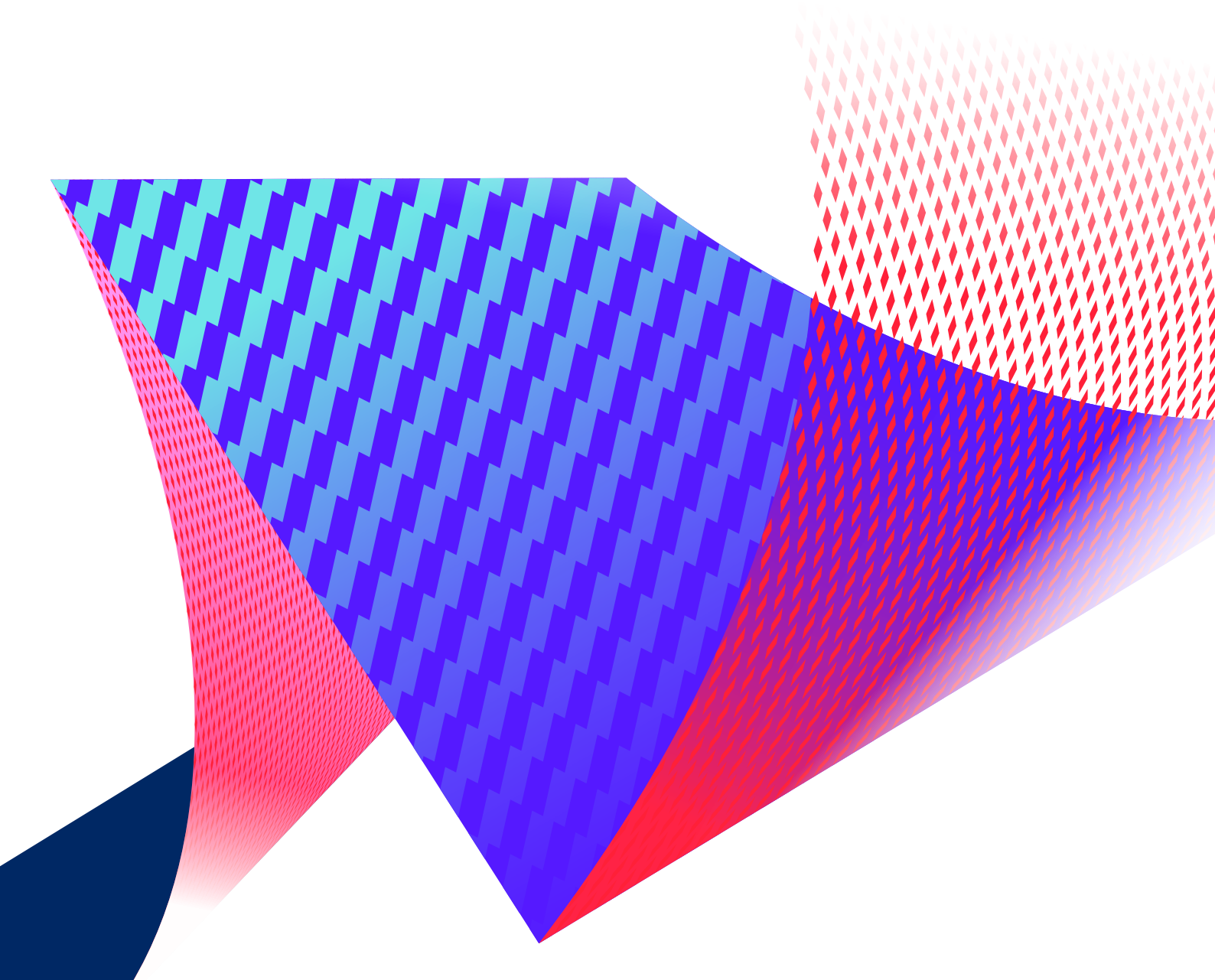


The Inevitable Need for Understanding Content

Overcoming unstructured content as an obstacle
to automation using no-code / low-code approach

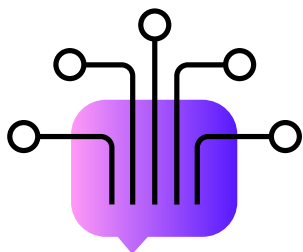


The Inevitable Need for Understanding Content

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Executive summary



Changing circumstances, evolving customer expectations, digital native competitors, and unexpected environmental changes such as the 2020 pandemic have significantly intensified the pressure on organizations to include digital transformation in their strategic plans.

The emergence of no-code and low-code development platforms has led to the democratization of artificial intelligence (AI) technology, which has given rise to the new citizen developer. Fast-growing technologies like robotic process automation (RPA) have also been instrumental in the first phases of the digital transformation journey for many organizations. With new urgency, businesses are moving quickly to uncover and automate more complex, higher value processes—processes that often touch customers and business partners and inevitably involve a myriad of unstructured content flowing through the organization that needs to be intelligently processed.

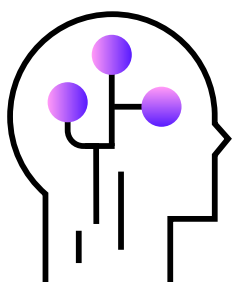
This is where Intelligent Document Processing (IDP) comes into play, replacing manual processing and enabling not only automation, but also creating more efficient ways of interacting with customers (i.e., no-touch, mobile, digital first, anywhere, anytime).

Intelligent Document Processing platforms must fit into the new paradigm of no-code / low-code and ease-of-use implementation in order to fulfill the needs of citizen developers across the entire organization and integrate well with other no-code / low-code RPA and business process management (BPM) platforms.

In addition, business users, partners, developers, and IT professionals are all looking for reusable components, which can be quickly utilized in new automation initiatives—tested, deployed, and adjusted—and allow them to achieve visible business results within a short period of time.

With ABBYY's latest Intelligent Document Processing platform, ABBYY Vantage, combined with the new ABBYY Marketplace, business users and citizen developers get best-in-class document and content processing in an easy-to-use, configurable, and pluggable platform, which is ready to use within minutes.

The citizen developer role in digital transformation



Who is the citizen developer?

[Gartner](#) defines citizen developers as “employees who create new business applications using development tools and runtime environments sanctioned by corporate IT.” Citizen developers are a new type of corporate user, empowered by the availability of low-code and no-code development tools and play a key role in Democratized Technology Services—a key trend in [Gartner’s Hype Cycle for the Digital Workplace](#). As non-technical business users, citizen developers work within a department and are interested in optimizing specific departmental workflows. They are experts in the business processes at hand but have no development education or expertise.

The impact of democratizing automation to the business outcome

To serve growing customer expectations, the rapidly changing business environment, and unpredicted circumstances, organizations experience a growing need to speed-up and strategically support their digital transformation efforts in order to not fall behind competition or fall short of customer demands. The external pressure to accelerate digitalization has led to the rise of Center of Excellence (COE) automation teams that include citizen developers who are gaining access to new no-code/low-code platforms, thus democratizing the use of optical character recognition (OCR), machine learning, and natural language processing (NLP) technology. With the help of citizen developers, content-centric processes are automated faster, and automation is penetrating the entire organization, well beyond the traditional focus on resource-heavy accounting automation such as invoice document processing. This trend, identified by Gartner as “[hyperautomation](#),” has been amplified by the need to provide uninterrupted services in the work-from-home paradigm caused by the global pandemic, and has proven that organizations who enabled democratization early on were better prepared to secure their digital operational excellence and operational resiliency.

No-code / low-code implementation as a driver of automation

How has no-code / low-code implementation changed the game?

Having recognized the inability of traditional IT to keep up with the pace dictated by the environment to deliver solutions that sufficiently support business automation, [over 50%](#) of medium-to-large enterprises are expected to adopt low-code application platforms as part of their strategic applications portfolio by 2023.



...in 3-5 years as much as 65% of development will be done in house using no code low code which are complemented by AI software bots...



["The Most Disruptive Trend Of 2021: No Code / Low Code"](#), Betsy Atkins, Forbes

In fact, [Forrester](#) goes as far as predicting that traditional developers, bending under the pressure of accelerated automation, will see themselves forced to embrace low-code platforms and support business users in building applications for automation in cross-functional teams.

The importance of no-code / low-code implementation to democratizing automation

No-code / low-code implementation has not only enabled citizen developers to solve their problems faster and at only a marginal cost compared to traditional development by highly skilled engineers, but it also allows them to constantly iterate, quickly adjust, and improve process automation until the desired results are achieved.

While in the past, automation was seen by many businesses as a cost-saving opportunity, recent events made it obvious for all that failing to automate everything that can be automated will eventually lead to their downfall. This realization will further accelerate the adoption of no-code / low-code automation platforms.

Current trends and obstacles to achieving the desired level of automation

The hopes and promises of RPA

Robotic process automation has been embraced by enterprise organizations as the universal solution to all automation and digital transformation problems and initiatives, which has fueled the RPA industry with exponential, unprecedented growth; however, businesses have quickly started to uncover and understand some of the limitations of this hyped technology in its current state. While RPA is great for automating low-level, task focused, repetitive activities, as soon as companies start automating high-value, complex processes involving content, they realize RPA alone is not enough. Automation of repetitive tasks do contribute to cost savings and employee satisfaction, freeing up resources for more customer-facing activities, but the true value of automation to the business outcome lies in end-to-end process automation, which requires the integration of more AI-based components into the RPA bots in order to truly automate high-value processes.

Enabling organizations to reach the next level of automation with content understanding

The current state and limitations of RPA technology, paired with the majority of employees working from home, has forced businesses to think of new ways to organize previously manual processes and has put much higher pressure on the need of automation to reach a new level. [Forrester](#) has identified embedding the right intelligent automation (IA) components as the first of seven innovations that will determine the true value of the RPA market. A key IA component to serve the needs of enterprises is embedded text analytics for document-centric use cases, which will drive significant platform revenue and value. This will make more transformational and higher-value use cases available to digital workers.



“ IDEP (Intelligent Document Extraction Platforms) use cases are the quickest path to intelligence.

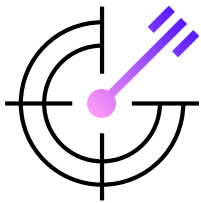
↳ [The Forrester Wave™: AI-Based Text Analytics Platforms \(Document Focused\), Q2 2020.](#)

In 2021, [20% of enterprises](#) are expected to expand their investment in intelligent document extraction, pushed by employees working from home and advancements in machine learning, which make it more valuable and easier to implement.

Extending the penetration of automation throughout organizations and processes

Citizen developers building apps with no-code / low-code platforms, evolution of RPA technology, advancements in machine learning, democratization of technology, and expansion of Automation Centers of Excellence have all been beneficial for automation expanding beyond the traditional data capture areas, such as accounts payable automation, into various departments and business areas struggling with processes involving documents. Easier to implement solutions and empowered business users, using platforms that can not only automate tasks but also understand documents and extract meaning from them, are making it possible to automate a variety of business processes, regardless of volume and complexity. This allows every department in the organization to move fast and push the boundaries of automation, ultimately achieving higher business results. The times when automating one single process required months in development and testing, skilled professionals, and IT budget are long gone.

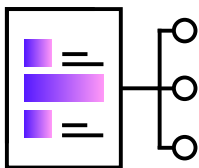
Reaching the next level of digital transformation and achieving higher business value



Content-centric and customer-facing processes are key

One of [Gartner's strategic technology trends for 2021](#) is Total Experience, which represents the combination of "multi-experience, customer experience, employee experience, and user experience to transform the business outcome." A common point of frustration throughout all these touchpoints is disconnected processes and back-end systems that process data, whether structured, semi-structured, or unstructured. To achieve the goal of Total Experience, at the point where employees, customers, users, and technology intersect, businesses will need to focus on content-centric and customer-facing processes, making sure these are automated efficiently, without latency and errors, and without repetitive steps. As a result, previous friction points for both customers and employees will be eliminated, customer experience will be significantly improved (leading to higher loyalty and business value), and employee satisfaction and sense of purpose will soar.

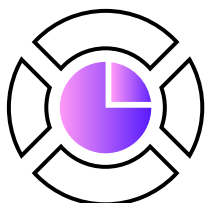
Another strategic technology trend is Anywhere Operations. Intensified by the "new normal" imposed by the pandemic, this model asks for "digital first" operations without physical interactions with customers or business partners. Another driving force calls for automating customer-facing processes with the highest priority in 2021 and beyond.



The benefits of automating unstructured content

Organizations today still struggle to deal with the enormous volume of documents and content that enter their businesses/enterprises/processes via business partners, suppliers, and customers. Such content is often semi-structured or unstructured, entering the organization through various communication channels in different formats, layouts, and languages, and creates tremendous complexity that makes many businesses waste vast human resources to handle. Until recently, the ability to extract useful data and insights from such content was reserved to human intelligence and highly complex tools that took months to setup and required highly skilled technical users. With the advancements of AI and machine learning and the ability of modern platforms to deliver this advanced technology through simple design tools and pre-trained machine learning models, this is no longer the case. IDP platforms such as ABBYY Vantage are now capable of providing trained cognitive skills to digital workers, enabling them to process content as humans would, by identifying many variations of a document, locating and extracting data, and delivering it to all types of intelligent automation systems, further triggering processes, and involving human interaction to only handle exceptional cases.

Equipping the digital worker with content understanding is the solution that will help RPA move digitization beyond task-focused automation and automate high-value end-to-end processes, which is what businesses are looking for in order to achieve real impact to their competitiveness.



Making the organization future proof by enhancing its digital operational excellence

Another strategic technology trend for 2021, according to [Gartner](#), is "Intelligent Composable Business," which is the ability of an organization to adapt and rearrange itself according to a current situation. Gartner predicts "this will also include increasing autonomy and democratization across the organization, enabling parts of the businesses to quickly react instead of being bogged down by inefficient processes."

Democratization will play a crucial role in the ability of businesses to react nimbly and adequately to such extreme situations, but also will the availability of pre-built, ready-to-go components that citizen developers can quickly integrate and deploy in their automation, without losing time reinventing what others have already invented. With the simplicity of no-code / low-code platforms and the access to pre-trained cognitive skills and components, organizations will be able to take all areas of the business on the digital transformation journey and closer to hyperautomation in much shorter deployment cycles and at significantly lower cost.

ABBYY technologies for no-code / low-code Intelligent Document Processing

ABBYY Vantage – a cognitive skills platform for the digital workforce

ABBYY Vantage is a no-code / low-code Intelligent Document Processing platform, providing cognitive skills that understand documents and extract meaningful data and insights from documents, forms, and correspondence to improve business outcomes. It helps organizations and the new citizen developer accelerate their digital transformation by complementing intelligent automation platforms like RPA, BPM, and systems of engagement with trained cognitive skills to understand content and perform like humans.

What are cognitive skills?

Vantage cognitive skills are easy to design and train document understanding models that are connected to intelligent automation platforms, digital workers, and automation robots to intelligently process business documents and content in a human-like manner—to understand and extract meaning and make decisions.

A skill offers a no-code design approach and allows citizen developers to utilize the power of Vantage cognitive services to design and train machine learning models for all types of documents.

ABBYY Marketplace – a rich collection of ready-to-go cognitive skills and technology components

ABBYY Marketplace is an online community for finding and sharing ready-to-go, reusable cognitive skills and technology components, enhancing the ABBYY Vantage platform. Citizen developers can access skills trained for specific documents, out-of-the-box Connectors, and other technology assets published by ABBYY, ABBYY partners, and their peers, based on industry, business process, document type, and more.



Document Skills – Understand a specific document type and extract key data insights. Document Skills are available as either trained and ready to deploy, or as framework for quick start. Document Skills use OCR, machine learning, and other AI technology to ensure high accuracy of extraction from structured, semi-structured, and unstructured documents. Users can train skill models during design-time and also enable online machine learning during runtime in order to further train the model and continuously improve accuracy and straight-through-processing rates.

- ✔ **Trained Document Skills** available in the ABBYY Marketplace are invoices and receipts, which customers can use out-of-the-box and further train the model on their unique document variations.
- ✔ **Framework Document Skills**, where all or main data fields are labeled and the model is trained on a smaller document set, include bills of lading, purchase orders, waybills, delivery notes, closing disclosures, and more. Framework skills provide a quick start to automating a document process and may require additional training before they can be reliably used in production environments.



Connectors – Seamless integration between ABBYY Digital Intelligence solutions and third-party applications and platforms such as RPA, BPM, systems of engagement, ECM, and more. On the ABBYY Marketplace, users can find connectors for UiPath, Blue Prism, Alteryx, and many more.



Classification Skills – Provide trained models to identify various documents associated with a specific business process or use case (for example, procure-to-pay). Based on classification results, route each document type to the corresponding Document Skill for extraction. Users can enable machine learning during production to further train the model and continuously improve accuracy and straight-through-processing rates.



Process Skills – Classify documents by type and combine a number of document skills to extract key insights from each document type.



Solutions – Combine document skills, classification, and business rules to solve a specific use case (e.g., customer onboarding) and automate a process end-to-end.



Custom Activities – Customized Vantage activities that can call other third-party RESTful services adapted for a specific need or process.

Browse the ABBYY Marketplace at
marketplace.abbyy.com

ABBYY – a Digital Intelligence Company

ABBYY is a Digital Intelligence company. We empower organizations to access the valuable, yet often hard to attain, insight into their operations that enables true business transformation.

Data provides the fuel for digital transformation. When enterprises are finally able to access the wealth of data that exists about the performance of their processes and the content moving through them, they gain the critical insight that is needed to raise their Digital Intelligence. With ABBYY's Digital Intelligence platform, enterprises complement their existing automation platforms and accelerate their digital transformations.

Digital Intelligence empowers organizations to make tremendous impact where it matters most: customer experience, competitive advantage, visibility, and compliance.

Talk to ABBYY today!

If you are looking to achieve greater control and visibility over your digital transformation, talk to ABBYY today. Let us help you assess your next project. For more information and office locations, visit us on the web at www.abbyy.com.



ABBYY

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