How Document Processing Can Streamline Government Efficiency

(h[s]) HYPERSCIENCE®

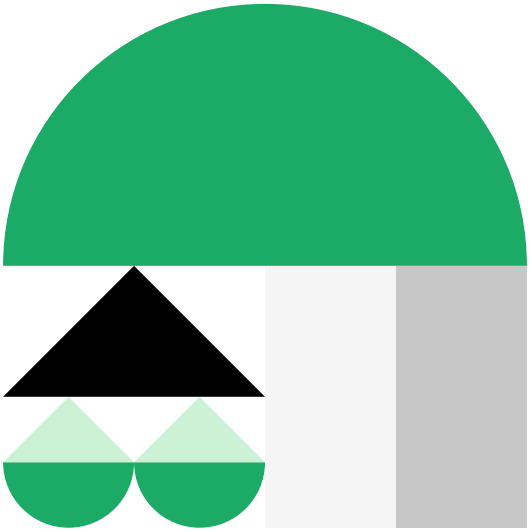
Contents

01 Introduction

The United States government doesn't just serve a customer base—it serves a population of 330 million people[1]. And because the government serves so many people at the federal, state, and local level, the need for scalable automation of business processes has never been more prevalent.

To date, the way the government has adopted software and other cutting-edge tech has been inefficient and piecemeal. Thankfully, there is a better way forward, and government agencies at all levels have the opportunity to lead in the adoption of automation tech to create a streamlined path forward for civilians and government employees alike.

This eBook will take a closer look at what an automated future looks like and how government agencies can move forward.



[1] Source: U.S World Population Clock

02 Legacy Pitfalls: Where Document Processing Solutions Can Help the Government Do More

While private businesses have spent the last 20 years going through comprehensive digital transformation initiatives, government entities have lagged behind.

Why the delay?

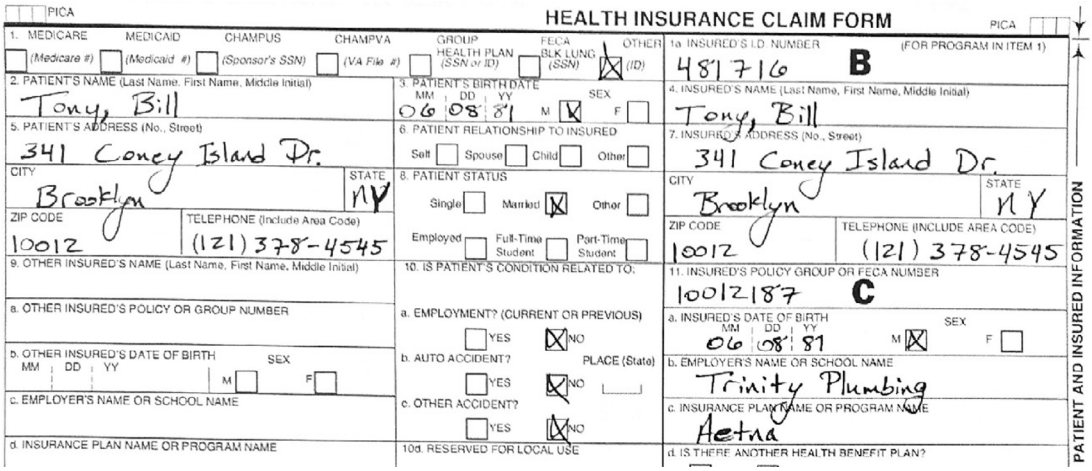
What the commercial space does today in terms of automating back-office work is hard for the government to do because of bureaucratic processes, legacy tech, and complicated administrative channels. As a result, the technology government agencies need to support faster processing, less manual errors, and quicker responses goes unused.

Some of these hurdles stem from policies that regulate correspondence between the government and its citizens. Take the requirement for agencies to respond to every citizen request and store records of the interactions, for example. As you can imagine, this creates mountains of paperwork and documentation without the capability for automation or digitization.

What's more, while private businesses can control how they receive information (e.g. form versioning, submission channels), most government agencies can't legally require the population to go online and fill out forms digitally, because not all citizens have internet access.

These paper-heavy processes are further complicated by legacy tech, which struggles to handle the variability and ambiguity inherent in real-world, hand-written documents. Because many of these outdated tech solutions are rules-based, following "if/then" logic and requiring structured data inputs, they fail to extract reliable data efficiently. If someone fills out a form and writes the letter "g" with the tail below the line, or writes outside of the (metaphorical and literal) box, legacy optical character recognition (OCR) software can't process the information.

Legacy OCR tech stumbles when faced with real world document conditions, including handwritten text, low resolution images, and text dropped below a line or written outside the box.



PICA

HEALTH INSURANCE CLAIM FORM

PICA

1. MEDICARE | MEDICAID | CHAMPUS | CHAMPVA | GROUP HEALTH PLAN | FECA BLK LUNG | OTHER
(Medicare #) | (Medicaid #) | (Sponsor's SSN) | (VA File #) | (SSN or ID) | (SSN) | (ID) — [X] (ID)

1a. INSURED'S I.D. NUMBER (FOR PROGRAM IN ITEM 1): 481716 B

2. PATIENT'S NAME (Last Name, First Name, Middle Initial): Tony, Bill

3. PATIENT'S BIRTH DATE: 06 08 81 SEX: M [X] F [ ]

4. INSURED'S NAME (Last Name, First Name, Middle Initial): Tony, Bill

5. PATIENT'S ADDRESS (No., Street): 341 Coney Bland Dr.

6. PATIENT RELATIONSHIP TO INSURED: Self [ ] Spouse [ ] Child [ ] Other [ ]

7. INSURED'S ADDRESS (No., Street): 341 Coney Island Dr.

CITY: Brooklyn STATE: NY

8. PATIENT STATUS: Single [ ] Married [X] Other [ ]

CITY: Brooklyn STATE: NY

ZIP CODE: 10012 TELEPHONE (Include Area Code): (121) 378-4545

Employed [ ] Full-Time Student [ ] Part-Time Student [ ]

ZIP CODE: 10012 TELEPHONE (INCLUDE AREA CODE): (121) 378-4545

9. OTHER INSURED'S NAME (Last Name, First Name, Middle Initial):

10. IS PATIENT'S CONDITION RELATED TO:

11. INSURED'S POLICY GROUP OR FECA NUMBER: 10012187 C

a. OTHER INSURED'S POLICY OR GROUP NUMBER

a. EMPLOYMENT? (CURRENT OR PREVIOUS) YES [ ] NO [X]

a. INSURED'S DATE OF BIRTH MM DD YY: 06 08 81 SEX: M [X] F [ ]

b. OTHER INSURED'S DATE OF BIRTH MM DD YY SEX: M [ ] F [ ]

b. AUTO ACCIDENT? YES [ ] NO [X] PLACE (State)

b. EMPLOYER'S NAME OR SCHOOL NAME: Trinity Plumbing

c. EMPLOYER'S NAME OR SCHOOL NAME

c. OTHER ACCIDENT? YES [ ] NO [X]

c. INSURANCE PLAN NAME OR PROGRAM NAME: Aetna

d. INSURANCE PLAN NAME OR PROGRAM NAME

10d. RESERVED FOR LOCAL USE

d. IS THERE ANOTHER HEALTH BENEFIT PLAN?

PATIENT AND INSURED INFORMATION

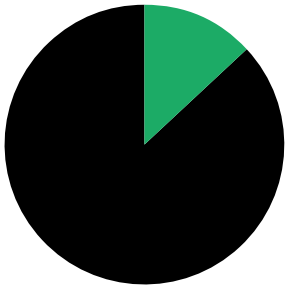
With the ability to automate highly repetitive tasks, robotic process automation (RPA) has also gained popularity in recent years. And while RPA can automate existing, well-defined tasks, it requires structured, machine-readable data that can be easily manipulated in order to be effective. But when it comes to unstructured data inputs (such as PDFs, emails, images, etc...), RPA struggles to process and extract the data accurately. This makes RPA a partial solution that needs to be supplemented with intelligent AI technology.

While some organizations may think they're at the beginning stages of automating manual processes, in reality they're left with multiple software solutions that require unnecessary manual oversight or intervention. This stunts the overall return on investment.

The good news is that ever-evolving advances in artificial intelligence (AI) and machine learning (ML) are bridging the gap between human understanding and machine processing, transforming the first mile of data processing. This enables government agencies and leaders to reduce manual work and unlock efficiency gains, rather than unknowingly continuing to contribute to the data processing backlog.

There are challenges to digitizing and automating government processes across the board, but that doesn't mean we can't do better.

03 What's Next for the Government?



13.2% of employee time is spent on work employees consider low-value. Across the government, this represents approximately 500 million hours spent each year performing low-value work.

Many government agencies are establishing internal technology advancement teams. These programs are meant to help government agencies adopt technology faster and with better results.

A few examples:

— The Presidential Innovation Fellows[2] program recruits and places workers from Deloitte, Lockheed, IBM and other innovative, forward-leaning, organizations inside government agencies.

— The General Services Administration created a Center of Excellence (CoE)[3] where they train both government and public sector employees to think about high-level automation and where ML is going.

Similarly, some technical government teams have been tasked with helping other agencies grow by aiding in the search, evaluation, and advancement of new tech initiatives.

There's great momentum building as government entities continue learning about exciting technology that will lead to the more effective use of taxpayer dollars.

With more pressure from the top, and more boots on the ground willing to adopt and integrate new solutions, the government can catch up with the demand. Additionally, taking cues from other private COEs will add thought leadership expertise to the growing need for automation in government.

[2] Source: Presidential Innovation Fellows
[3] Source: GSA

04 3 Keys for Intelligent Document Processing

Intelligent document processing (IDP) solutions capture data from documents and then categorizes and extracts data for further processing, leveraging AI technologies such as computer vision, OCR, Natural Language Processing (NLP), and machine/deep learning.

Leading IDP solutions read documents efficiently and extract relevant data accurately, involving humans only when necessary. This solves the critical, "step zero" problem of getting data off a page so it can be used by various applications.

Three major value drivers of integrating IDP solutions into government agencies, offices, and processes are:

1 **Faster responses to inquiries**
Managing growing document backlogs while providing citizens with the services they need is no small feat. And serving citizens correctly can take time, especially with dated, paper-driven processes like invoice processing.

By deploying an IDP solution that can read, process, and output accurate data quickly, citizens get the answers or critical services they need faster.

2 **Better historical record access and analysis**
One of the biggest things government agencies do is collect data. It's suggested that the Department of Defense and the General Services Administration alone have well over 10,000 forms available for download. The inconsistency of documents prevents this data being analyzed to scale as there aren't enough employees to read, key, and process every piece of information.

IDP can help process and extract information from different types of historical, archived documents. By unlocking the data in these documents and creating an analytical database, private and public entities can more effectively analyze historical trends.

3 **Improved record management and compliance**
A record is a log of any transaction with an agency, and all of these documents need to be stored in a manner that is compliant with federal regulations.

IDP software is one of the only adept solutions that will help government agencies convert and digitize these paper files quickly and accurately. This eases the burden of maintaining compliance, and helps keep records more organized for future use.

05 Greater Government Efficiency Lies Ahead

For agencies wishing to digitize their records, it takes technology that can read documents, classify them, extract the data, and translate it into usable information that can be stored in systems of record for further processing and analysis.

The complexity of what government agencies deal with will always push legacy tech to its limit. With the right solution, government entities can stay current, consistent, and compliant, better managing workloads and providing improved service to citizens.

Watch a demo