Integrated services delivery: Solving old challenges with new technologies

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Introduction

One of the most important responsibilities of government is to deliver essential services to citizens, such as those related to providing a basic standard of healthcare, maintaining roads and bridges, and helping businesses grow and prosper. The age-old challenge for any government is to do so in a way that meets policy objectives while achieving cost efficiencies. Costs associated with operations management can escalate when governments operate inefficiently, diverting funds from essential citizen services.

Meanwhile, with the advent of the digital world, new issues are emerging, including heightened citizen expectations regarding their interaction with government. This white paper discusses those challenges and explores how new technologies and integrated services delivery can help governments meet them.

Changing technology creates new expectations

As technology evolves, citizens expect their government to keep up. In today's world, they expect to interact effectively with government across multiple channels—in person, by phone, via email, and online—with each channel regularly updated and aware of actions across channels. Even government agencies expect other agencies to possess advanced technological capabilities, with easy access to extensive metrics on program effectiveness.

While the demand for services is growing, more departments face constrained budgets and reductions in head count, increasing the reliance on technology to provide higher quality services with fewer resources. As new technologies become available, pressure on government increases to transform the way they deliver services, shifting the view of adopting those technologies from a novel approach to a public responsibility. For example, the advent of the telephone enabled government to offer essential services remotely instead of only at walk-in facilities. Thereafter, 911 and other emergency services became critical channels for government delivery of services. Similarly, government websites will soon be expected to allow citizens to complete online transactions and enable every connected device to serve as an access point to government services—impacting how services are delivered across all channels.

Technology critical to enabling citizen and device interaction must connect the information in back-end systems to the people and devices that need it. Information must be easy to store, work with, and share within and between agencies, facilitating service delivery to citizens and maximizing technological investment.

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User adoption drives service delivery success

In the last ten years, governments worldwide have adopted new technologies to make their services available on the web. Now that these eGovernment initiatives have come to fruition, governments are being tasked with measuring their success with hard metrics.

There are different ways to determine service delivery effectiveness as shown in the following tables. For example, the U.S. Office of Management and Budget (OMB) suggests analyzing adoption, usage, and customer satisfaction metrics to determine the success of an eGovernment initiative. And a 2007 report by Gartner suggests grouping metrics into two categories—customer experience and government productivity—as a means of measuring service delivery effectiveness. Studies show, however, that the result is the same no matter what method an agency uses. Findings illustrate that the key driver in service delivery success is a positive user experience, which leads to increased adoption by the public as well as internal agency staff. No matter how efficient a channel is—be it web, phone, or in-person—it's of no sustainable public value if citizens aren't adopting it. So, while many government organizations are concentrating on back-end infrastructure investments, they would be wise to balance that approach with a focus on customer engagement technologies to drive adoption and effectiveness.

eGovernment initiative metrics	Definition
Adoption/participation	The degree to which the relevant community (for example, agencies, bureaus, and other organizations) participates in the initiative. Participation includes contribution of information to and involvement in governance, funding, and other areas.
Usage	The level of use by the targeted end user.
Customer satisfaction	End-user satisfaction with the initiative's products and/or services.

Customer experience metrics	Government productivity metrics
Shorter decision cycle • Easier-to-find solutions • Simplified documentation • Ease of status checking • Accuracy • Scheduling ease • Clarity of options	• Reduced internal labor hours • Coordinated handoffs • Fewer errors/less fraud • Decreased complexity

Public preferences for government interaction

Since adoption is critical to implementing technology across channels, it is important to consider how the public wants to interact and the challenges they face in those interactions to decide where to apply technology.

A study by the Pew Internet & American Life Project published in May 2004 profiled how Americans are contacting the government:[1]

- 42% used the telephone.
- 29% visited a government website.
- 20% visited in person.
- 18% sent an e-mail.
- 17% wrote a letter.
- 22% used multiple means.

1 Horrigan, John B., "How Americans Get in Touch with Government," Pew Internet & American Life Project, May 24, 2004.

This same report found that among those who have broadband, the greatest percentage of people (36%) preferred using a website to contact the government. For those with dial-up access, this number dropped to 27%, with 41% preferring telephone contact.

More recent reports by organizations such as the National Audit Office in the United Kingdom cite higher figures for website contact—a general trend as Internet adoption and access to broadband increase worldwide. The United Kingdom is trying to reduce the gap between telephone and website contact by funding over 6,000 Internet locations in local libraries and other public facilities. This is an example of a hybrid solution that extends government access through web technologies within the community.

Similarly, a December 2007 report on Australians' use and satisfaction with eGovernment services showed that the Internet was the preferred way to contact the government. In fact, two out of five people (41%) preferred to contact government through the Internet, while in-person contact declined from 33% (2004–2005) to 20% in 2007.[2]

Factors influencing service delivery strategies

While meeting the growing demand for online service delivery, new solutions can't be expected to replace traditional channels of interaction. Instead, they provide an alternative that can extend access and provide better service at a lower cost, for example, by shifting volumes from high-cost channels such as in-person service. In developing a service delivery strategy, it is important to consider the tradeoffs between each channel to help ensure the right mix and level of technology investment and how investments in one channel can be shared across others.

For example, the UK National Audit Office discovered that approximately 45% of online access to government websites occurs outside of normal office hours—times when phone calls or in-office visits are impossible.[3] On the other hand, citizens in rural areas who don't have reliable access to Internet services or those who simply don't have the computer skills to interact with a government website primarily contact government by phone, e-mail, mail, or in person. What's more, these channels are not mutually exclusive, meaning that a citizen may start in one channel and then move to another, depending on the complexity of the issue and experience with a channel.

Each channel presents its own set of benefits and challenges. The following tables provide a summary of findings that governments should consider when planning a service delivery strategy.

Problems encountered in phoning government offices	Yes	No
Not having the time to stay on the phone or make repeated phone calls	36%	63%
Not being able to get through to the right person	35%	63%
Being placed on hold for long periods of time	31%	67%
Getting transferred to many people	30%	69%
No one returning your call	24%	75%
Not being able to figure out where to call	21%	78%
Not being able to call during business hours	18%	81%

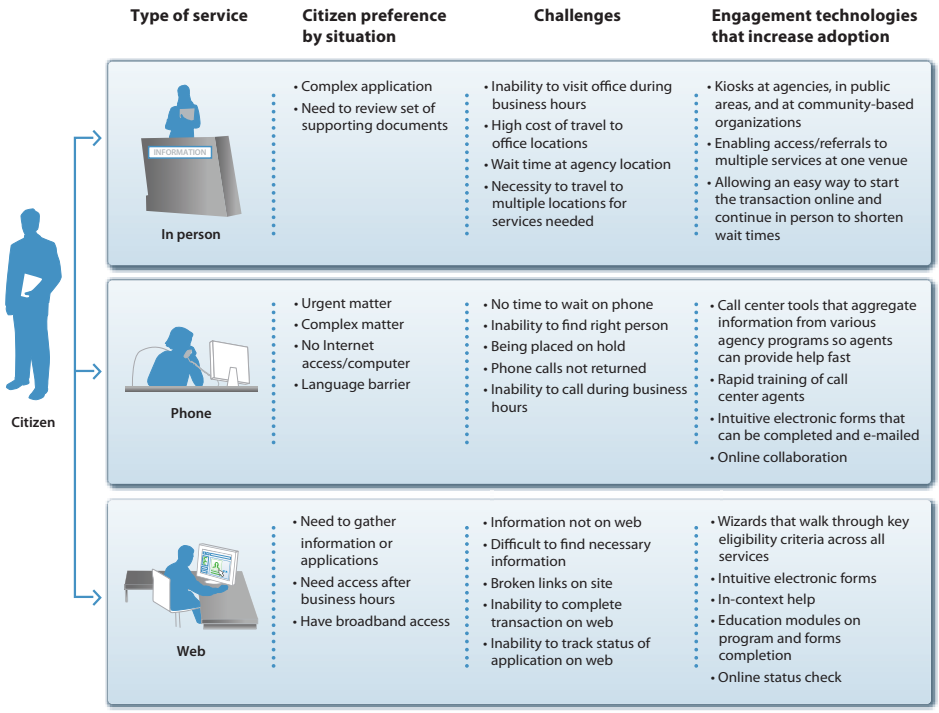
Source: Pew Internet & American Life Project survey, July 2003, n=684, Margin of error is +/- 5%

2 "Australians' Use of and Satisfaction with e-Government Services," Australian Government Information Management Office (AGIMO), December 2007.
3 "Government on the Internet: Progress in delivery information and services online," UK National Audit Office, July 13, 2007 *(www.nao.org.uk)*.

Problems encountered in using government websites	Yes	No
Website didn't have information needed	33%	65%
Website was difficult to navigate or figure out	20%	79%
Had difficulty figuring out what site to go to	18%	83%
Website had bad or outdated links	16%	85%
Experienced difficulty downloading forms or instructions	13%	85%

Source: Pew Internet & American Life Project survey, July 2003, n=480, Margin of error is +/- 5%

Engagement technologies improve interactions across all channels



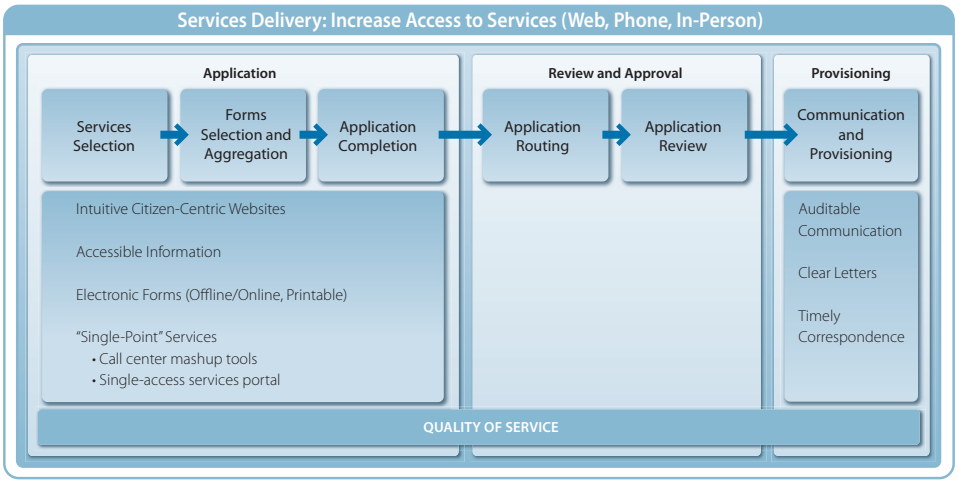
Governments can apply engagement technology investments to each of these channels to increase service quality and user adoption. What's more, improving the adoption in one channel can indirectly impact the quality of the experience in the others. For example, agencies that increase the adoption of their online channels divert the volume of transactions they experience in both the phone and in-person channels, reducing wait times on the phone and in field offices. Because web self-service is the least expensive channel to support per transaction, governments are wise to improve their online user experience.

Engagement technologies: Increasing public and cross-agency access to information and services in all channels

Engagement technologies can bridge the gap between data, the staff that has to work with it, and the public that needs to access it. These technologies are critical to promoting the adoption of any service delivery channel. Following are some key areas in which engagement technologies benefit government agencies.

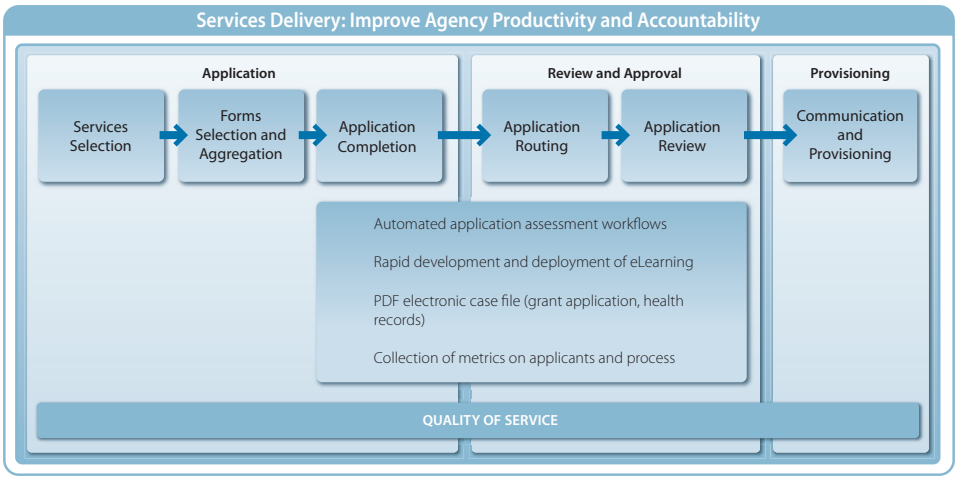
Increasing participation and access to services:

- Services and benefits enrollment
- Access to critical information
- Constituent education
- Security and data privacy



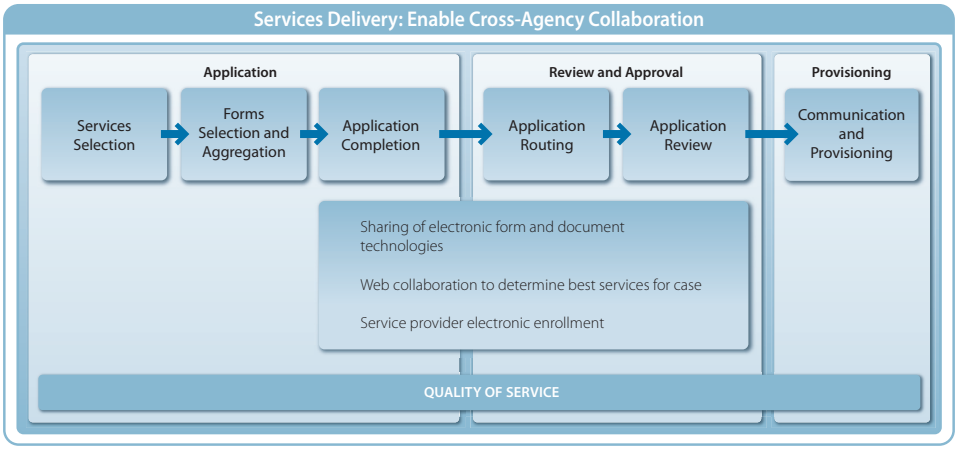
Improving agency productivity and accountability:

- Transparent application assessment and review
- Rapid training



Enabling cross-agency collaboration:

- Sharing services between agencies
- Promoting real-time, more secure collaboration across multiple programs
- Onboarding service providers to help ensure the best offering

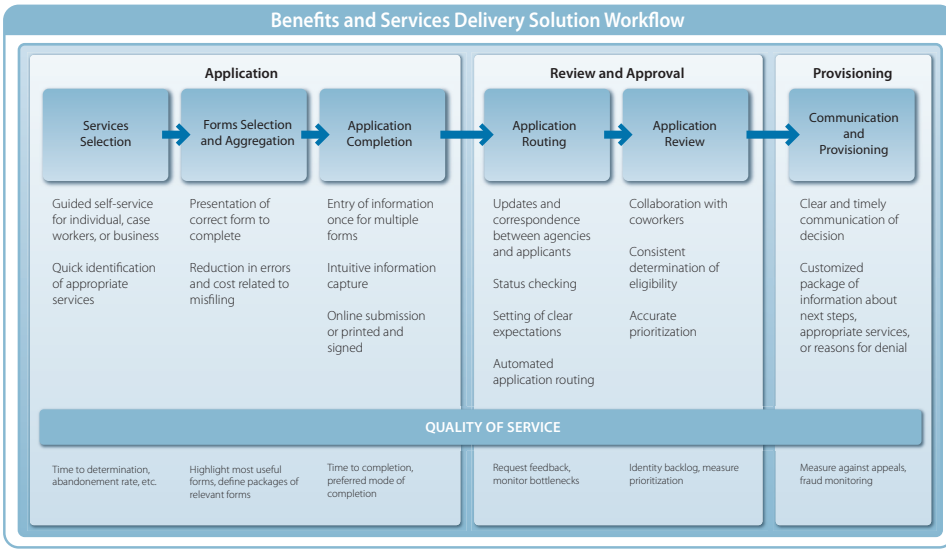


Engagement technologies are a critical bridge between back-end systems and people and processes. For these technologies to achieve high adoption rates in any channel, they must meet the requirements presented in the following table.

Requirement	Determination criteria
Universal access	Does the proposed technology allow for the widest access by citizens and businesses across all software/hardware platforms? Is the technology freely available to the public?
Universal format	Does the proposed technology store information and records in formats that are widely accepted and that will persist even after the system itself is obsolete?
Accessibility	Does the technology help ensure that people with visual impairments can still gain access to the needed services?
Support between paper and digital	Does the technology support a hybrid system to allow modernization without disenfranchising those who want to continue to interact with government via paper?
Offline support	Does the system support offline access to sustain workflows when constant Internet connection is not possible?
Paper fidelity	For electronic documents that need to act as legal records, does the printed version of the document/form look like the electronic version?
Document security	Is there a way to protect sensitive information in the electronic forms and documents?

Service delivery steps and best practices: Strategies for improving the process

This section communicates best practices for applying engagement technologies by outlining the six phases that applicants must successfully complete when they interact with government via any channel.



Services selection

In this phase, citizens may not know what services they need or that the government even has a program that can help them. The agency's goal here is to drive awareness of the service program and provide convenient and easy access to additional information. Success in this phase is critical to the overall effectiveness of a program and the delivery of essential services to eligible citizens. At the same time, governments must also inform individuals who are ineligible for specific programs and direct them to other, more appropriate services.

Ensuring that citizens are aware of services is a critical component in matching their needs to available programs. Initiatives such as website consolidations, 311 phone services, and multiservice agency initiatives provide a single point of entry to help eliminate confusion. Subsequently, the channel points them to the specific information they need.

Another best practice is to provide guidance in a way that citizens can easily grasp. For example, agencies can organize online services by life events or provide a wizard that asks questions to guide citizens to the appropriate service program. While this concept is not new, it is valuable in simplifying selection among a group of services that might at first seem overwhelming.

Phone agents can also benefit from service selection and prescreening applications to help them more effectively assist citizens who call. Similarly, agencies can reduce lines at in-person offices by providing kiosks to educate visitors on services and eligibility requirements. With these options, citizens will be more educated about their needs when they speak with a service agent.

Forms selection and aggregation

Once citizens identify the benefits and services they need, they must select and access the correct forms for enrollment. Depending on the number of services and complexity of the application process, collecting the required forms can be an involved process. Citizens may need to access websites, call offices, and/or travel to local offices to collect forms. Certain programs have prerequisites, and if they're not met, the program may demand a new set of applications. For example, an application may ask for a valid Social Security number, but a recent immigrant may not yet have that number. In this situation, the applicant requires a unique set of forms.

Regardless of the channel that citizens use to access applications, it is important that agencies always provide them online, in electronic format. By doing so, an agency effectively makes every computer with Internet access a distribution channel for services. It gives people who cannot go to an agency office a convenient and instantaneous way to retrieve the forms they need and allows community-based organizations to act as mediators in helping citizens access services within their neighborhood. It also enables agencies to e-mail forms to citizens who call, so they don't have to wait days or weeks for them to arrive in the mail.

Some agencies only offer online, HTML-based applications. This may be an efficient way to collect information; however, an electronic PDF file that can be saved and viewed offline, or printed, is more valuable, especially if the process requires the applicant to gather a lot of information.

Another benefit of electronic forms is that as policies change, the forms can be easily modified and updated. Obsolete printed forms don't need to be discarded and new forms printed, avoiding the cost of paper, printing, and delivery.

Application completion

While success in the first two phases is tied to matching the applicant to relevant services, in this phase it depends on efficient and accurate data collection, which may be done by requesting applicant data at a service center, asking a set of questions over the phone, or gathering the information online via a self-service portal. Regardless of the channel, forms need to be collected.

A study done by the UK National Audit Office found that "forms remain essential to the delivery of a wide range of government services. If forms are well-designed and easy to handle, then errors will be fewer and the administrative load is less, leading not only to better access to services, but also considerable efficiency gains."[4] The study also noted that one of the most frequent ways citizens interact with government is by completing forms. If forms are difficult to understand and fill out, the public is less likely to perceive that government is making services accessible.

Ineffective, confusing forms can also affect program participation rates and result in subsequent administrative costs associated with processing. For example, the Driver Vehicle Licensing Agency in the United Kingdom estimates that it costs £8 to process each of the six million driving licenses it issues annually. That's a total of £50 million a year.[5] Making forms easier to complete, input, and store can have a significant effect on downstream processing costs.

4 "Difficult Forms—How government agencies interact with citizens," UK National Audit Office, London, October 31, 2003.
5 Ibid.

An effective first step for any agency is to provide PDF application forms on internal and external websites for downloading and printing or saving and accessing offline. Not only does this help ensure that applications are available to the public at all times, but it also enhances convenience and reduces the need to print a large supply of forms that will become obsolete with the next change in legislation. The key to successful proliferation of PDF forms at all levels of government is the fact that the user only needs to have free Adobe® Reader® software to access them.

Although these best practices help with streamlining the forms distribution process, they do little to address challenges such as missing information, incorrect information, and illegible responses. Many of these issues can be resolved by making the forms "fillable." This allows applicants to complete, save, and print forms using Adobe Reader and can result in enormous savings. Consider the State of Illinois Department of Human Services as a case in point. The state has saved $12.5 million annually by converting 1,500 forms from static to fillable forms.[6]

Electronic, fillable forms, whether completed by the applicant or a service agent at an office or over the phone, can enforce simple rules that guarantee comprehensive, accurate data collection. These include ensuring that mandatory fields are completed and that valid values are entered. In some cases, forms may come with prefilled information or include inline, context-based help.

Making forms adaptable to the user's capabilities is also important. The forms must to be easy to understand and complete. For example, Kane County Circuit Court's Order of Protection petition utilizes a wizard with easy-to-understand questions and an electronic form that looks exactly like the paper version. Citizens can access the wizard to complete a petition, and lawyers can access the PDF form to quickly complete it by tabbing through the various fields.[7]

Application: Process Improvement Strategy

- **Make it easy**
  Instead of citizens searching for information on their eligibility for individual government services/programs, provide one entry point for assessing possible eligibility across programs.
- **Improve access**
  Provide digital means to capture enrollment information that is available both online and offline across the majority of operating systems.
- **Multiple services → one application**
  Where possible, seek to capture as much common information as possible once, and prepopulate the information across application processes.
- **Prefilled applications**
  Reduce errors and simplify the enrollment process by prefilling forms with existing information about the applicant.
- **Simplify**
  Provide front-end complex/legal PDF forms with an intuitive wizard to aid capturing data in XML that can be used to populate the complex/legal PDF forms.
- **Increase accuracy at point of capture**
  Instead of waiting until a form has been submitted to validate data, do it at point of entry to improve citizen satisfaction and reduce internal labor hours spent handling data error exceptions.

Services Selection → Forms Selection and Aggregation → Application Completion

Key Metrics Improved

- Ease of finding programs and reduction in time to complete
- Accuracy of information received
- Reduction in internal labor hours and complexity
- Reduction in phone channel use

Application routing

Once citizens have submitted applications online, in person, or by mail, agencies may distribute the data to different agencies. Distribution poses the following challenges:

- Manual rekeying of information into databases and other systems
- Lack of awareness about whether applicant information is received by the different agencies
- Accountability of individuals in the process

6 Adobe Success Story, "State of Illinois, Department of Human Services," www.adobe.com/cfusion/showcase/index.cfm?event=casestudydetail&casestudyid=338214&loc=en_us.
7 Adobe Success Story, "Kane County Circuit Court," www.adobe.com/cfusion/showcase/index.cfm?event=casestudydetail&casestudyid=280322&loc=en_us.

- Difficulty updating key decision-makers with additional supporting documents and information relevant to the case
- Inability to identify bottlenecks and drive operational efficiencies

These challenges can result in backlogs in applications, the inability to update citizens on the status of their applications, and inaccurate processing time estimates. The application completion step addresses some issues, helping to ensure that information is in an electronic format that can flow into databases and other systems. For those remaining, an automated workflow can greatly improve transparency, accountability, and operational efficiency.

There are many process management/workflow technologies in the market with varying capabilities, price points, and flexibility. To achieve the best results for routing and managing documents, consider implementing software that:

- Handles both documents and forms
- Is easy to use
- Is accessible by staff across agencies
- Integrates well with existing systems
- Allows processes to be changed quickly in accordance with changes in legislation and business requirements

Application review

Application review is the phase where staff from one or multiple agencies provides input on a case and creates a solution that offers the best results for the citizen.

Currently, much of this process is paper-based and performed in program silos. Collaboration and review is cumbersome, time-consuming, and cost-prohibitive, especially for cases involving a combination of solutions from various agencies.

However, technologies such as electronic case reviews and virtual case collaboration are changing the way government agencies work together to bring the best solutions to their constituents (figure 7).

Using PDF files and tools, teams can conduct electronic document reviews, commenting on documents and viewing the comments of others in real-time. They can provide efficient assessment recommendations on cases where there are clear-cut rules about eligibility and the levels of benefits and services provided. This enables staff to spend more time on complicated cases where the guidelines aren't as obvious.

Government agencies can also use virtual meeting rooms to collaborate. These enable staff that don't have the time or budget to travel to review cases in real-time. The Court of Cremona in Italy already uses this technology to virtually review cases.

Review and Approval: Process Improvement Strategy

- **Electronic delivery of applications**
  Reduce costs and shorten decision cycles by allowing citizens to submit application documents electronically instead of in paper.
- **Electronic data exchange**
  Eliminate manual data reentry of application information into databases by submitting XML electronically.
- **Automated application routing**
  Increase transparency, accountability, and consistency by automating business processes so status can be tracked and people involved authenticated.
- **Digital rights management for electronic documents**
  Protect sensitive and private information by enforcing access at the form or document level, as this is how information is often shared.
- **General determination of eligibility**
  Use technology to create easier ways for agency staff to assess eligibility across multiple programs for simple cases.
- **Prioritization based on mitigating factors**
  Enable electronic queuing of applications so that applications can be prioritized based on program policy or regulations and staff workload.

Application Routing → Application Review

Key Metrics Improved

- Shorter decision cycle
- Coordinated handoffs
- Reduction in internal process complexity
- Ease of checking status of requests
- Accountability

Eligibility determination and communication

Once a government makes a decision regarding an application or case, staff must communicate the determination to all agencies in the review, the service providers that fulfill the benefits, and the applicant. Traditionally, agencies have communicated via paper correspondence, which requires two to six weeks for delivery.

Thanks to the changing technology landscape, e-mail and portals can provide viable and superior alternatives, shortening wait times and precluding phone and in-person status inquiries. Still, agencies need a scalable, cost-effective solution that will allow them to manage multiple channels while accommodating the need to customize each and every piece of correspondence.

Sometimes, communication may require the inclusion of complex legal information or compliance with program policy. In such cases, a correspondence management system can help generate tailored, compliant letters, tracking and auditing them at an aggregate level.

Providing a service portal for third-party providers not only speeds the communication of new, approved cases requiring critical services, but it also provides a way to analyze the quality of the third party's services. Staff can look at program participation rates and management to see how well the service provider is handling the cases.[8]

Eligibility Communication: Process Improvement Strategy

- **Email notification of updated status**
  Reduce costs and time. Provide option for electronic correspondence and enable applicant to specify electronic communication preference.
- **On-demand, customized information (hospital near applicant)**
  Increase relevance and benefit of service information package by tailoring it to citizen's context.
- **More secure correspondence automatically generated**
  Encrypt electronic correspondence that contains private information to help ensure only authorized individuals have access.
- **Correspondence management**
  Manage and track regulated or legal correspondence to help ensure adherence to policies.

Communication and Provisioning

Key Metrics Improved

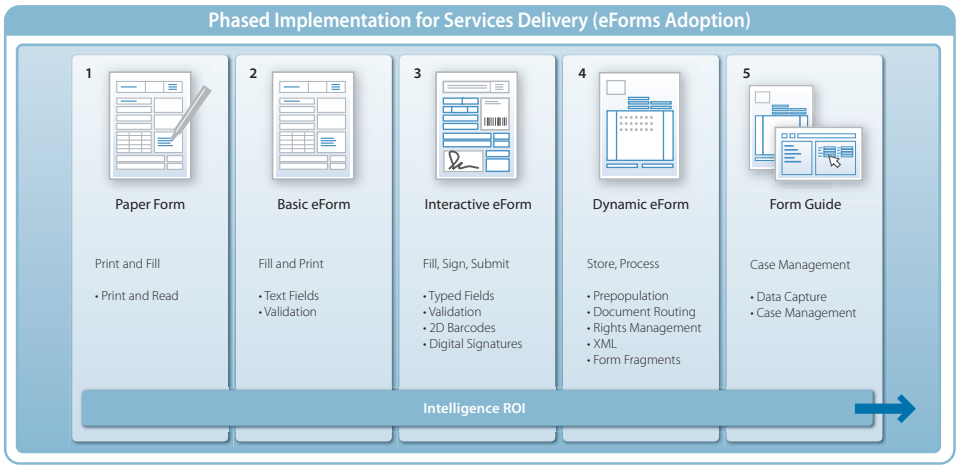
- Ease of finding programs to solve problems
- Accuracy of information received
- Reduction of ineligible applications

A phased approach to service delivery transformation

Gone are the days when government can spend years and millions of dollars before realizing the value of a project. Faced with budget cuts and the need to show immediate results, agencies must consider a phased approach to applying technology investments across service delivery channels

8 Adobe Success Story, "Court of Cremona," www.adobe.com/cfusion/showcase/index.cfm?event=casestudydetail&casestudyid=377905&loc=en_us.

that will enable them to realize benefits after each phase. The following figure shows the logical steps to transform traditional paper-based processes into service delivery that incorporates electronic forms and workflows.



Conclusion

The pursuit of a balance between providing high-quality, critical services and ensuring responsible use of revenue collected from the public is ongoing. The basic challenges associated with service delivery have been the same for years. The difference now is the existence of new technological methods to tackle them.

Technologies to support electronic forms, integrated services portals, automated workflows, and virtual collaboration and training have become mainstream realities. As these technologies become more pervasive, the impetus for government adoption will shift from experimentation to public responsibility. To maintain public trust and favor, governments must focus their investments on these technologies to improve the way they deliver critical benefits and services across all government channels.

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