TRANSFORMING PLAN REVIEW

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For government agencies, it's critical to catch all issues with a building or site plan before it is approved. Yet the traditional way of reviewing plan sets — in paper form only — presents many challenges for planning departments, especially in storage, access and version control.

So how do you transform your plan review process without creating a burden on your budget and IT department? *Read on to see how.*

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Make plan review the start of your digital transformation

Analyst calls for digital transformation can seem far from the realities of your local plan review responsibilities. Review processes are commonly driven by the paper plan set submitted to create new projects in your community. Unfortunately, dealing with large plan sets, requiring submissions during business hours, managing collaboration challenges and dealing with impatient submitters takes up most of your time, so digital transformation may not be top of mind.

If this is your experience, you live in the world that digital transformation wants to change. At its core, digital transformation seeks to make transactions and processes electronic and provide end-to-end solutions. But perhaps most importantly, its goal is to improve the customer experience. Fortunately, these are also things that can make your planning process much smoother.

Affecting the customer experience is difficult if you continue to rely on paper plan sets that infect your process with time-consuming tasks and increased costs. If you still accept paper plan sets for larger projects, each re-submission – often with multiple sets required – is a cost to the submitter.

Construction projects also cost more the longer it takes to get a certificate of occupancy. This tends to add pressure to your staff to get things done as quickly as possible. If the project also includes the potential for jobs for your community, it is likely that pressure could come from your elected officials as well.

THE BENEFITS OF GOING DIGITAL

The costs of paper-based plan review extend to the cost of government as well. Here are some cost drivers you can quantify and positively affect with electronic plan review:

Cheaper submission costs for larger projects

Paper plan sets are expensive and re-submissions require additional time and cost to submitters. Digital plans are easier to edit and do not require costly re-printing. By going electronic, you save the submitter measurable time and dollars.

Lower storage costs for plans and approved plans

All those submissions have to be stored somewhere and, in paper, their form factor means special cabinets and ever-increasing physical storage costs.

Higher growth and the cost of more staff

Electronic plans improve customer service and drive increased staff productivity. Avoiding additional FTEs is another way to justify the investment in a plan review solution.

If your community is growing, you may be experiencing increasing review backlogs. Electronic plan review users see backlogs disappear and avoid adding additional staff. They are often able to deliver review decisions faster as well.

Field staff support

Access to better and electronic information in the field, the ability to use electronic forms on a tablet and the use of photos to document conditions are all things that going digital can bring to fieldwork. By bridging the gap between process steps that happen in the field and those that happen in the office local government can access the information they need anywhere, anytime.

THE COSTS OF RELYING ON PAPER
Then there are the cost factors that are more difficult to quantify, but still have a large impact.

Slower development review could mean less development
This is a loss of potential jobs and tax revenue for your community. Online services are considered as basic now thanks to our smartphones, web usage and private sector experiences. Government is expected to offer the same options.

If your community is interested in more business development, the perception of how easy it is to work with your building or development services department is critical. If you are perceived as difficult to work with, businesses may choose to locate in a neighboring community instead.

Phone calls for status
How many calls does your staff take that are questions about the status of a review and the anticipated completion date? How much time is lost? How does it affect the number of reviews that can be completed in a month?

These cost factors and challenges are familiar problems for plan reviewers. It can be tempting to overlook the effects of paper on a government process because we have done it that way for so long. Digital transformation asks that we consider the customer experience. It is one of those rare moments where an analyst theory can actually improve a classic government process, make staff work easier and improve the experience of our external customers.

Next, we'll show how electronic plan review makes your internal process better and improves the experience of your plan review staff.

Customer experience isn't just for the public

Previously, we talked about plan review, digital transformation and the customer experience of those who submit plans for local government to review. Going paperless changes the costs, time and annoyance of plan reviews for submitters, and those can be great results for your planning department.

But digital transformation also requires that we find tools to support our own staff so the efficiency driven by a convenient electronic front end isn't wrapped around the same paper-driven internal process.

RAISING EXPECTATIONS

Many aspects of paper plan reviews can sap the efficiency and output of review staff. And, when this is sitting behind a web-based electronic submission tool, you raise the expectations of submitters without doing anything to address some of the underlying challenges that your staff faces.

Here are some examples:

The black hole

This is the great **black hole of plan review**. We have the plan, but we don't know its status in the review process.

If you accept electronic CAD files but store them in a siloed solution, it's still hard to know where the project is in the review process. Having electronic files that aren't connected to a workflow engine means you created a different kind of file cabinet, but not necessarily a better one.

Silos

Storing disconnected electronic files in a CAD solution doesn't help make information available. It offers limited long-term storage options and lacks process transparency.

This is the perennial issue with information accessibility. Where is it stored, and how do you find it or even know it exists if there isn't a single place to store it?

Versions and revisions

Bigger plan review projects often have multiple review cycles with marked-up plans. Keeping the latest versions straight can be difficult, as is ensuring that the final, correct plans are the ones returned to submitters for construction. With multiple paper documents or electronic ones and no version control, you risk finalizing the wrong set.

Comparing versions

Staff will rightly focus on the required changes. But in a large plan set, do they have the time to review every sheet for all potential changes? And if they do, how does that slow the process?

Multiple review cycles also highlights the need to compare plan sets. And the bigger the project, the harder it is to know what has changed.

Mismatch between reviewers and community growth

This forces local governments to wait to add staff until the growth cycle kicks in. In the meantime, workloads increase, review times lengthen and submitters complain.

If you live in a high-growth community, you might have a true mismatch between the number of reviews and available staff. This is exacerbated by the reality that the revenues from that growth usually lag behind staffing needs and infrastructure development requirements.

DELIVERING ON YOUR PROMISE

So how does **electronic plan review** help your staff cope with these challenges? Here are a few ways:

Submission portal

An electronic start to the process means that staff can take advantage of **workflow**, which automatically notifies them when reviews are needed or due. It also adds clarity as managers can see all the reviews in progress.

Central repository with version control

Having a single place to store plans while maintaining all the versions correctly helps to eliminate time lost to file room searches.

Workflow automation

Utilizing electronic workflow and digital plans means that review statuses are easy to see, assignments can be tracked and review deadlines are easier to meet. This eliminates the black hole of plan review.

Comparison tool

Accepting electronic plans also allows you to leverage tools that can colorize changes to different plan versions. This helps staff immediately consider required changes and helps ensure they don't miss unexpected changes that might not be to code.

Real-time collaboration tools

Real-time collaboration means that staff no longer endure long meetings where they attempt to aggregate and consolidate all comments.

While staff often review plans based on their discipline, collaboration is necessary. And being able to work on one plan set and see each reviewer's comments can increase the effectiveness of reviews.

Correspondence generation

A solution that can automate the creation of correspondences while leveraging a single marked-up plan set with a comments tool translates into faster communication to the submitter. It also means time savings for staff as they communicate necessary changes.

Mobile access

Moving to digital plans increases the field accessibility required by inspectors. This includes the possibility that what they encounter in the field might be unexpected.

Offering a better customer experience is often discussed, but that is only part of the transformation equation. Customer experience improvement isn't just for the public. It helps our staff care for our residents more efficiently and effectively. Investing in electronic plan review delivers results for both sides of the fence and put your community on the path to good development.

Next, we'll discuss your long-term responsibilities for plan sets such as critical records.

What does end-to-end mean for plan review?

Above, we talked about one of the key themes of digital transformation: Customer experience. We connected this theme to the support we can provide to our review staff and the convenience our submitters see by moving to **electronic plan review**.

Customer experience is important, but you can't deliver it without another feature of digital transformation: End-to-end solutions. It isn't just having a web-based portal for submission or even leaving behind the paper. Customer experience goes to the core of the quality of tools you provide during the process.

There are several indicators of quality, including the ability to integrate with other solutions that staff or submitters use as well as the ability to simplify and preserve access to information required during and after reviews. The customers for your plan review solution include the people in your organization that need access to review information and final plans after the review.

THE BENEFITS OF END-TO-END

Consider some of the benefits of "end-to-end" and ask yourself if this would help drive efficiency for your organization:

The ability to leverage data from previous steps in a project's life

Plan review is more of a middle step in the life of a project. Developers, builders and residents need permits before they can move forward. That process involves entering data, possibly working with project teams and consulting geographical information solutions (GIS) to place the project on a map and in context.

At every stage, data is entered in one of your solutions. That data should be leveraged to avoid duplicative data entry, multiple paper forms and wasted time.

Removing the need to bounce between applications

Your solution set should work together seamlessly, especially the solutions used in a single process. From an investment standpoint, selecting solutions proven to work together can help you create a seamless end-to-end experience that creates a good customer experience.

Making information available anywhere, anytime, on any device

Your plan review investment should consider how a solution can preserve critical documents and connect them to other important documents like permits, licenses and photos so that field staff and first responders can access them when needed.

Going paperless makes this possible, but it needs to be supported by a secure repository, mobile access and **a connection to GIS solutions**. With those pieces in place, field staff can access information without carrying paper files and first responders can access plans, permits and other information that make a difference when they respond to an emergency event.

THE END-TO-END MINDSET

Considering an end-to-end solution will make your staff more efficient in some obvious ways. Solutions that talk to each other and pass data from one to the next save your staff time by eliminating data entry. They also save submitters time when data they have entered for permits and licenses can be pre-populated when they submit the actual plans for review.

End-to-end also means that **solutions are connected** so review staff can access all documents and permits they need easily in one place. Less toggling between solutions saves time for staff and integration can also mean less staff training.

Finally, end-to-end means thinking beyond the work of our department and remembering that plan review is unique in that it is intimately involved in creating our community. The projects and buildings we review today will remain long after the review process. It is essential to preserve the project documents in a way that others in your community can access them. Digital is one part of that answer, but the ability to store them in a repository that is accessible today and tomorrow, in a universal format and in the field, is true end-to end thinking.
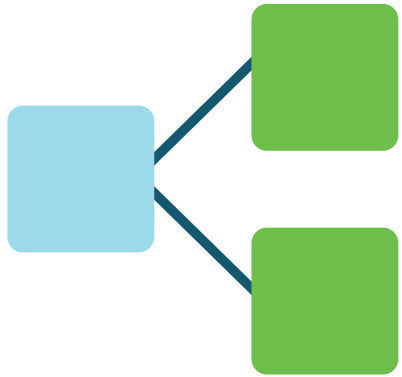
Develop and Report - Why Your Plan Review Solution Should Have Dashboards

Many of the features highlighted in earlier sections cover the tools you need to improve your plan review process. This includes getting rid of paper, automating reviews, offering a way to submit and communicate online, etc. But what about the tools that would make elected officials, development board members and process improvers happy?

That's where reporting comes in. Have you ever had the moment where you needed to answer a question about a specific application, or more generally, how a process is working? If so, you can imagine the value of having an executive dashboard with easy-to-create reports on your review process. Dashboards are a trendy topic, but let's break down why the solution you pick needs to have the right kind of dashboards.

THE STAKES AND THE COMPLEXITY

It's common depending on the project for plan review to be very high profile for your community. It goes directly to the perception of your community as being open to development and the jobs and revenue that come with it. But plan review is process heavy and if you are using paper, you can't really understand where things are in a review. It's hard to easily aggregate the number of applications in a process, the types of applications you receive and the historic trends in development. To accomplish these measures in a paper world, your staff is likely building and maintaining separate systems to answer questions and better understand what has been submitted. This is a serious drain on staff time and doesn't offer real-time answers.

One of the best aspects of deploying the right electronic plan review process is that by abandoning paper and automating the process, you get the data and features you need to drive better reporting. Dashboards need reviews to be moving electronically through your process to be meaningful measures of that process. And, if it is a paperless process, your staff won't be burdened with painful manual processes to track and aggregate data about the review submissions you are receive.

THE PROCESS (IMPROVEMENT)

Because the plan review process is highly visible, there will always be calls to improve it, to make it faster or more convenient. And as always, calls to make it cheaper to participate. To accomplish this, the process must be mined for insights – the types of projects, the length of the review process and the ideal staffing levels (or the gap between workload and existing staff).

In this context, dashboards that build on an electronic process need to have the ability to examine that process. This means the ability to do more than aggregate applications by date and type, it means diagnostics to judge the process itself. This means that the underlying functionality of the reporting includes collecting data on time to process each application. The ability to understand the time each individual review takes and which stages are taking longer. With this functionality, you can build on the initial efficiency improvements of going electronic and base actions on dashboards that look at process health and bottlenecks.

If your goal is to continuously improve your review process to better serve your jurisdiction, your solution needs to include the tools that will allow you to do that and the tools should include the ability to build this data automatically so your staff doesn't need to perform manual tasks to provide a picture of the health of the process.

THE ANSWERS ARE DIGITAL

Overall, Electronic Plan Review is a must-have technology for communities with review responsibilities by offering crucial functionality, like:

- **Digital process** - Provides the foundation for better services and the ability to improve the process.

- **Tools to drive efficiency and manage reviews** - Empowers your review team with a better user experience and more visibility and accountability for the stages of the review process.

- **Dashboards for visibility** - Provides elected officials and managers with a real-time picture of the development in your jurisdiction and the efficiency of your review team. With these tools you don't just know what types of development are happening, you know how your team is dealing with the development workload. That picture helps you continue to offer better service in the future.

A digital process makes truly descriptive dashboards possible, meaningful and impactful. With robust reporting tools, you can continue to strike a balance between thoughtful plan reviews and process improvements that can produce better and faster development in your jurisdiction.

Your checklist for transforming plan review

If you're ready to explore **electronic plan review**, you're probably also looking for key features that support the customer experience, achieve end-to-end results and ensure a sound IT investment. Digital transformation may be a lofty analyst idea, but it can offer real improvement for the review process and the experience of submitters and reviewers.

Solution features that support the idea of "end-to-end" processes also have their part to play in your efforts to **transform your plan review process**. Ensuring that data is available and that manual data entry is never repeated can be one of the most important contributions you make to the operations of your organization.

End-to-end also implies less switching between applications to improve efficiency. And staff (and customers) have fewer solutions to learn. For IT staff, fewer applications means less to support, update and secure. It's another benefit to a department that faces challenges of modernization and cyber-security.

These efficiency gains rely on choosing a solution with the right features and capabilities. Choosing a solution that can adapt to the changes in our communities and responsibilities – affordably and easily – makes it easier for your IT department to be responsive to business needs.

THE ESSENTIAL PLAN REVIEW LIST

Consider some of the benefits of "end-to-end" and ask yourself if this would help drive efficiency for your organization:

☐ **Content services core**

Permits, letters, reports, photos, video and plan set versions are all collected and consulted as a plan is reviewed. In the future, they might even be consulted again in another plan review. But perhaps more importantly, first responders may need these items. A content services solution handles all types of content, makes finding it easier and can serve it up from other solutions used by staff. This core is a long-term repository accessible only by your review staff, meaning critical content isn't in a silo when public safety needs it.

☐ **Integration to permitting data and GIS solutions**

Passing data forward from your permitting solution to your plan review application means less re-typing for submitters and the ability to archive permits along with the plans and other documentation around the project.

☐ **Web portal for submission**

A core tenet of **digital transformation** is having an online presence and a web portal to accept electronic plan sets at the start of the process. It also creates a lower cost for submitters.

☐ **Dashboard for managing reviews**

Managing an internal review process is tricky. There can be several reviewers, internal and external, multiple reviews assigned to a single staff person and even legal timeframes for completion.

Limited views of individual projects isn't helpful for those with a coordinating role over the reviews in process. A key part of the customer experience is to provide the right tools to staff when they focus on individual projects or the process itself.

☐ **Workflow to automate routing, staff notifications and review deadlines**

Automating tasks drives efficiency. With workflow, automatic emails and timers can keep staff within timeframes for reviews and assignments.

☐ **Revision and version control**

Most reviews require more than one submission. So a solution that can keep track and control versions and revisions is essential to ensure that staff review the most current version and that the final approved plan is stamped that way.

☐ **Integrated, real-time collaboration comparison tools**
Seeing the comments of reviewers as you work and quickly seeing how plans changed are make reviewers more efficient. A plan viewer that can colorize differences between versions means staff don't miss requested and unrequested changes and approve something that wasn't fully approved.

☐ **Correspondence creation and status updates for submitters**
Tools that support communication to submitters and make it easy to aggregate the comments across all reviewers is a real time saver. Look for a solution that can automatically aggregate the comments into a letter for submitters and send status updates of the review without requiring staff to answer telephones or sit in long team meetings to aggregate comments and mark up plans.

☐ **Reporting**
Coordinators need the ability to see reviews in process. But other managers, executives and elected officials may want reporting to understand what is happening in their jurisdiction as well as the review process itself. Dashboards that can describe a process and leverage data from other systems is helpful when you get a question from someone outside of the review team.

☐ **Electronic delivery for marked-up plans and final plans**
Digital plan sets are significant files, so being able to share them back electronically in a format like PDF/A with bookmarks and pointers to comments extends the convenience to submitters. It also saves postage and courier fees for your department via secure online delivery.

☐ **A central, secure repository for all content and the final plans**
As mentioned previously, preserving the process and the final plans in a way that makes it easy for later generations and other staff to do their jobs is the true meaning of end-to-end and will save your community ever-growing storage fees for paper plans.

☐ **Mobile access**
A solution that offers mobile access and tools for electronic inspection forms can drive even more efficiency for your overall community development effort. And, in the event that a project requires a public safety or other emergency response, supporting their access in the field can literally save lives.

☐ **Configuration, not custom code**
This last point is more for your IT staff, but it is essential that the solution you pick can be changed and expanded affordably in the future. Government processes change and solutions need to change with them.

If you pick a solution that uses custom code to integrate or automate your process, you can face significant costs and deployment delays while needed changes are made. Picking a solution that **can be configured**, and doesn't need to be coded, helps ensure that a solution has a long life and a good ROI.

Use this list

As you consider transforming your review process, use this list to search for the solutions that have the most potential to improve your external customer experience and support review staff. And, use this list to match real plan review tools to the loftier goal of digital transformation and the important goal of investing in a robust and sustainable solution.

With this kind of tool kit, you will achieve that rare moment when real work intersects with analyst ideas and delivers better government.

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