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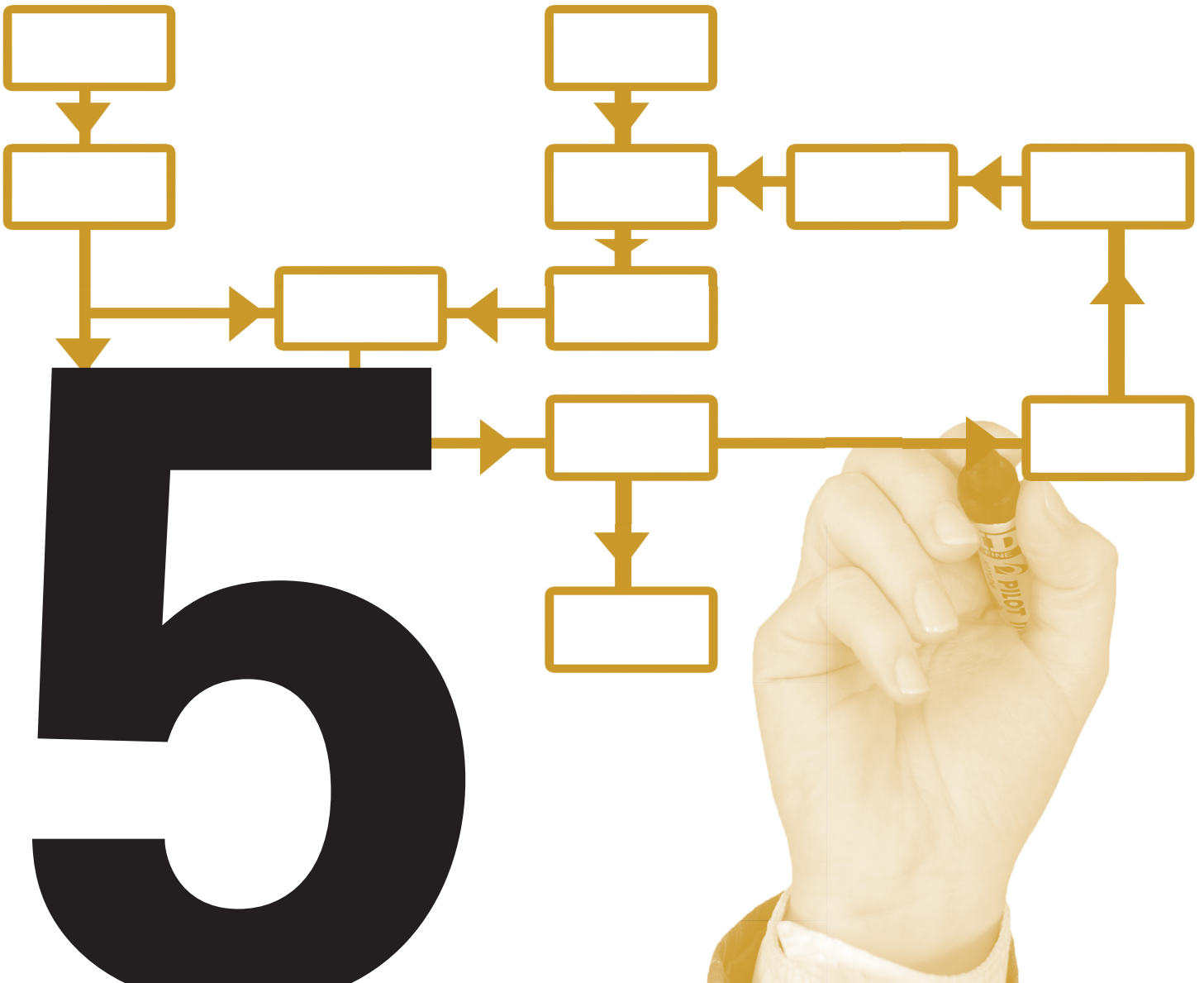
PRACTICE PROCESS IMPROVEMENT



Development Review Process Improvement

By Norman Wright, AICP

Many practitioners have inadvertently found themselves to be part of a development review process that has become cumbersome and frustrating to all.

Imagine a scenario: An applicant comes to city hall seeking a permit to install a new awning above her store's entrance. She discovers that, because the awning's overhang extends over the sidewalk, she needs public works staff to review the request. Also, because the awning is for a building in a historic district, her request must be reviewed by the district's design committee. Additionally, building safety staff must review it for proper construction. Before that review, however, she needs a variance because awnings of this size aren't allowed by the zoning district. But the planning department cannot process a variance application until she has a conceptual review meeting with staff, and the application for a conceptual review meeting requires a building elevation to illustrate the effect of a new awning on the current architectural design. Which the applicant lacks.

These requirements, by themselves, do not bother the applicant. All the same, she soon makes an angry call to the mayor because this simple visit to city hall led to her being sent to five different department offices where each reviewing authority has given her its own process and time line. Combined, all review processes and requirements add up to at least a nine-month total review time in order to potentially receive a permit. The commensurate fees are also more expensive than the awning itself.

Sound familiar? Over the course of decades, the work we do to review projects and issue approvals has grown in complexity, much as our regulations have. The negative effect this has on customer experience is becoming more apparent. But inefficient processes not only cause frustration, they also contribute to greater delay and expense in the construction process, and worsen the economic conditions we planners seek to remedy.

In the current analysis of zoning's impact on the housing market, much work has been done to identify the need for new policies that respond more dynamically to the growing demand for supply. We've explored the potential of "tiny homes," inclusionary zoning, and accessory dwelling units, and have authored a shift to form-based standards in exchange for more flexible density requirements. These and other improvements are designed to allow our zoning practice to be more conducive to the need for housing in a broader set of forms and options.

Such policies move us forward. But this is only half of the challenge. Every great new policy requires an equally responsive implementation process. This was one of the major findings provided by a 2016 report from the Obama administration, which stated two important effects from a lack of focus on process improvement: "Unnecessarily lengthy permitting processes restrict long-run housing supply responsiveness to demand, and also present an inefficiency for city planners and reviewers whose time could be more effectively spent on essential tasks" (The White House 2016, p. 15).

A more efficient process for administering our zoning ordinance is a relief to frustrated applicants and overburdened planners; it is also a key element of our response to the housing affordability crisis seen in many regions of the country. Improving this facet of our work provides tremendous benefit to virtually everyone. This issue will explain how to conduct such an effort in a way that yields immediate results.

THE PRINCIPLES OF PROCESS IMPROVEMENT IN DEVELOPMENT REVIEW

In private-sector industries such as manufacturing, process improvement is a discipline unto itself. Two approaches form the bedrock of this practice: Six Sigma and Lean. Six Sigma focuses on reducing the defect rate of underlying processes associated with producing products. Its name is a reference to a statistical goal: A Six Sigma process is one where there are six standard deviations between the specified acceptable limits for a process and the process's mean result. This translates to one defect for every 3.4 million opportunities (iSixSigma n.d.). Lean is a process improvement approach that focuses on "cutting out unnecessary and wasteful steps in the creation of a product so that only steps that directly add value to the product are taken" (Villanova University n.d.).

Over the years, both approaches have effectively been combined to promote efficient (i.e., "lean") processes that create high-quality deliverables (i.e., meeting the Six Sigma standard). If the term "Lean Six Sigma" sounds familiar, know that it is a neologism for "efficient and high quality." For this article, we incorporate this dual approach. We start with the principles rooted in Lean.

The very first principle one must embrace with process improvement is value. Value in the sense that every process delivers something necessary and desired for those who enter it in the first place, including those who practice the process. In development review, that can be an entitlement (e.g., a rezoning, a conditional use permit, a variance). Consider the ultimate source of value—the one deliverable that allows someone to deliver their own value to the community—the building permit. To see value in the building permit from the applicant's standpoint, and to also see value in the process itself from the practitioner's standpoint, changes our view of the process and allows the next principle to make sense. The applicant gains the ability to construct

their project. The practitioner gains the assurance that the project will meet our regulations and thus promote the proper growth and change we seek to create.

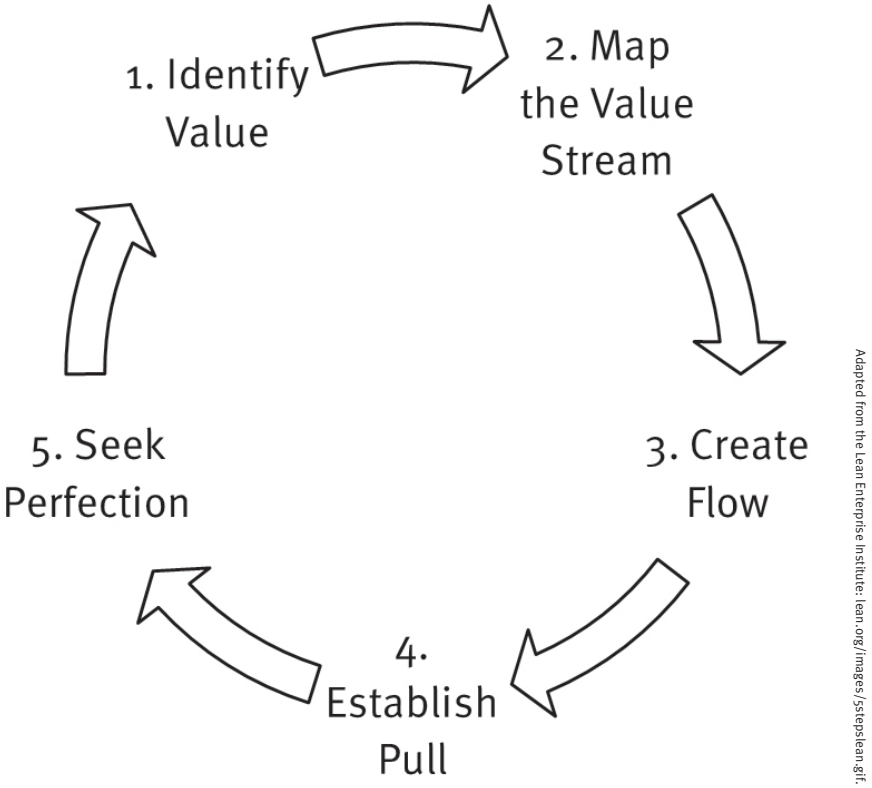
The next principle is mapping the value stream. In our case, it is the sequence of activities that blend together to create and deliver the permit. At minimum, this sequence starts at intake, when an application is received. Every progression through this stream creates a combination of work (people reviewing the permit request) and value (people finalizing the review and delivering their comments).

This progression is signified by the third principle: flow. When the process runs smoothly, it presumably has good flow in that there is no unnecessary delay. When a process is disjointed or bottlenecked in one area, the flow suffers. To even consider the notion of flow is to already think very differently about a review process. In this light, we no longer see the "silos" or "islands" where the planners review one thing, then another, ad infinitum with no care for what happens upstream or down with the engineers or building code reviewers. Instead, flow leads one to see his or her own work as one of the interconnected actions that deliver the overall value to the applicant. This concept of flow is intuitive to all review staff. But it takes a new meaning when considered with the next principle, establishing pull.

"Pull" refers to the value the customer draws from the process. Consider the fact that development review does not operate on its own, producing permits as inventory or stock for others to pick up if they want them. Our work is demand-driven, determined by the number of requests or customer demands we receive. As this relates to development review, the customer makes a request, we do the work, and the customer thus "pulls" value (i.e., a reviewed plan) according to our defined process.

In development review, we are often "pulled" to respond to increased volumes of permit requests in the spring and summer months when construction activity is its highest. The greater volume and demand strains our resources, and it becomes critical to balance quality versus quantity. This inevitably comes down to capacity. As lean as a process can be, it can still only serve so many customers until it either loses its timeliness or its quality. But what is the limit? How much becomes too much? Establishing pull is centrally focused on answering those questions.

The final concept is continuous improvement. When all other principles are applied and you begin improving your process, you do so with a vision in mind. This vision will naturally be specific (e.g., to reduce permitting times by 20 percent) and must be measurable by creating key performance indicators (KPIs) for the team to accomplish. When done right, something marvelous happens to a team. They start to meet their KPIs and fulfill the vision. Spurred by their success, they naturally seek to then improve it further. Every action in process improvement creates greater value, which leads to happier applicants, which leads to happier staff, which leads to even happier applicants, and a virtuous cycle is born.



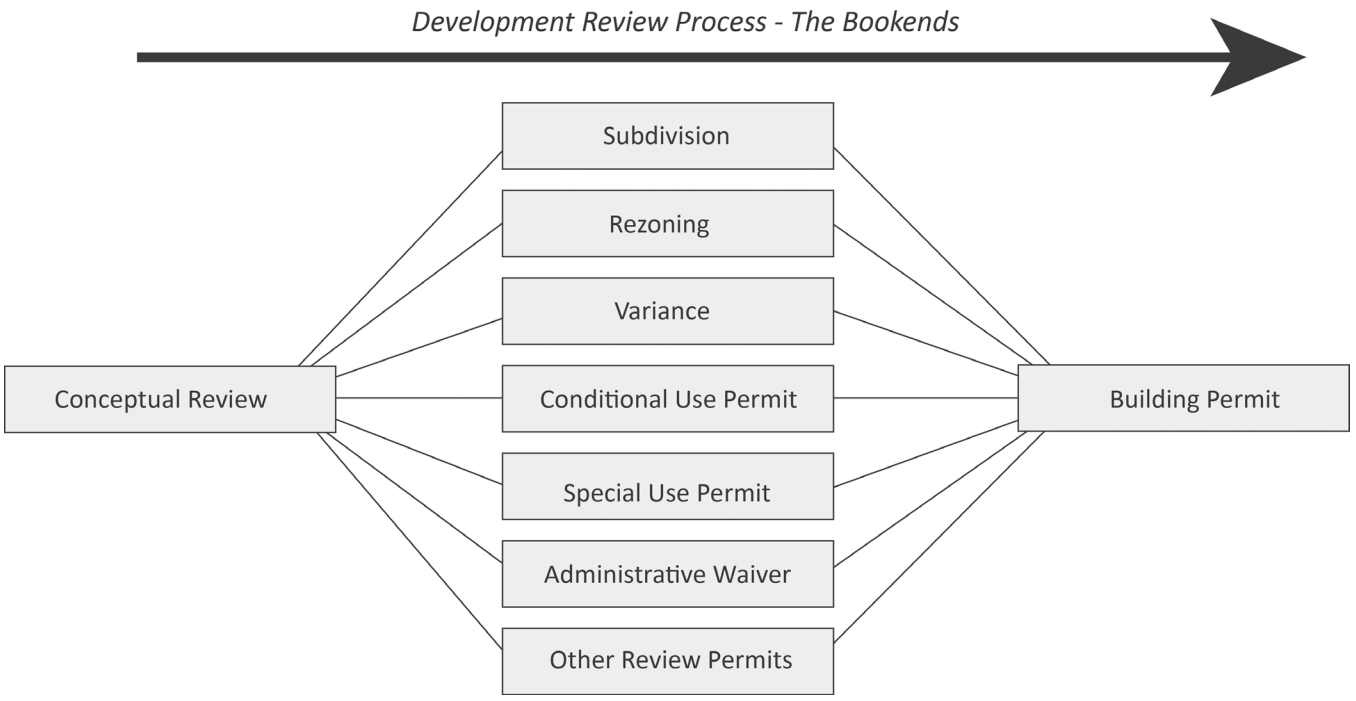
Adapted from the Lean Enterprise Institute: lean.org/images/5steplean.gif.

The Five Principles of Lean from the Lean Enterprise Institute.

APPLYING THESE PRINCIPLES TO ADAMS COUNTY, COLORADO

To see the real strength of developing this approach, consider the transformation we've experienced in Adams County, Colorado. This is a jurisdiction of 500,000 in the Metro Denver region that is currently experiencing record-breaking volumes for development review. In past years, as recent as 2014, this volume would have crushed the staff. Time lines were not measured, but it wasn't uncommon to have basic plan reviews take six months to complete. Complaints were frequent, and the staff was beleaguered and divided. No elements of the system were consistently implemented using online case management software, and people had to hand off physical plan documents from one person to another like passing a baton in a relay race. Much of the delay in reviews came from an inability to pass the baton successfully. Or to even have to do such a thing at all.

In 2015, we identified our first two processes to improve. This decision required some definite strategy. We couldn't improve all processes at once so, in our case, we chose the two processes that either consumed the most volume or had the greatest ability to create "front-end impact" in a manner that could ensure smoother flow in later stages of development review. The rationale here is



The basic development review process from its origin in conceptual review to its completion with a building permit.

Norman Wright

that our system (and yours, too) has leverage points where relatively small changes can create huge improvement. This leveraging is best identified by the 80/20 rule, a phenomenon where 80 percent of your system's activity is influenced by 20 percent of the total system.

In terms of volume, building permit review consumes the majority of our review activity since it is the back-end process for all projects (nearly 5,000 cases in 2016). In terms of front-end impact, the conceptual review process best ensures a smooth flow with all other functions that operate downstream. Simply put, these are the critical bookends (i.e., the 20 percent).

Finding the Value

With the two processes identified, we applied our principles for improving each. To illustrate, let's consider conceptual review. We start with value: what is the value of this meeting? We define it from our standpoint as well as the client's. In both instances, value is generally defined by the *quality* of what we produce and the *time* in which it is delivered.

In terms of quality, the value of these meetings comes not just from the guidance we provide in the meeting but also, most especially, from the formal comments we provide afterward in document form. These meetings often generate a lot of information for an applicant. It can be hard to follow our message completely in the 30-minute window we provide. So our staff often tried to consolidate the comments into a document that was sent after the meeting—typically via email. That letter then represents the essential recipe for how the applicant can accomplish the project in accordance with our zoning regulations.

So again, the letter is the highest piece of value from this process. For the client and for us. In the past, however, our process didn't ensure that all the proper experts attended the meeting. The idea of "consolidated comments" was often a non-starter since we seldom had a building official, engineer, or code enforcement officer in the meeting. Even when members were in attendance, we didn't always ensure that our comments were consistent, clear, and in chronological order. So quality was often far less than what we knew it could, and should, be.

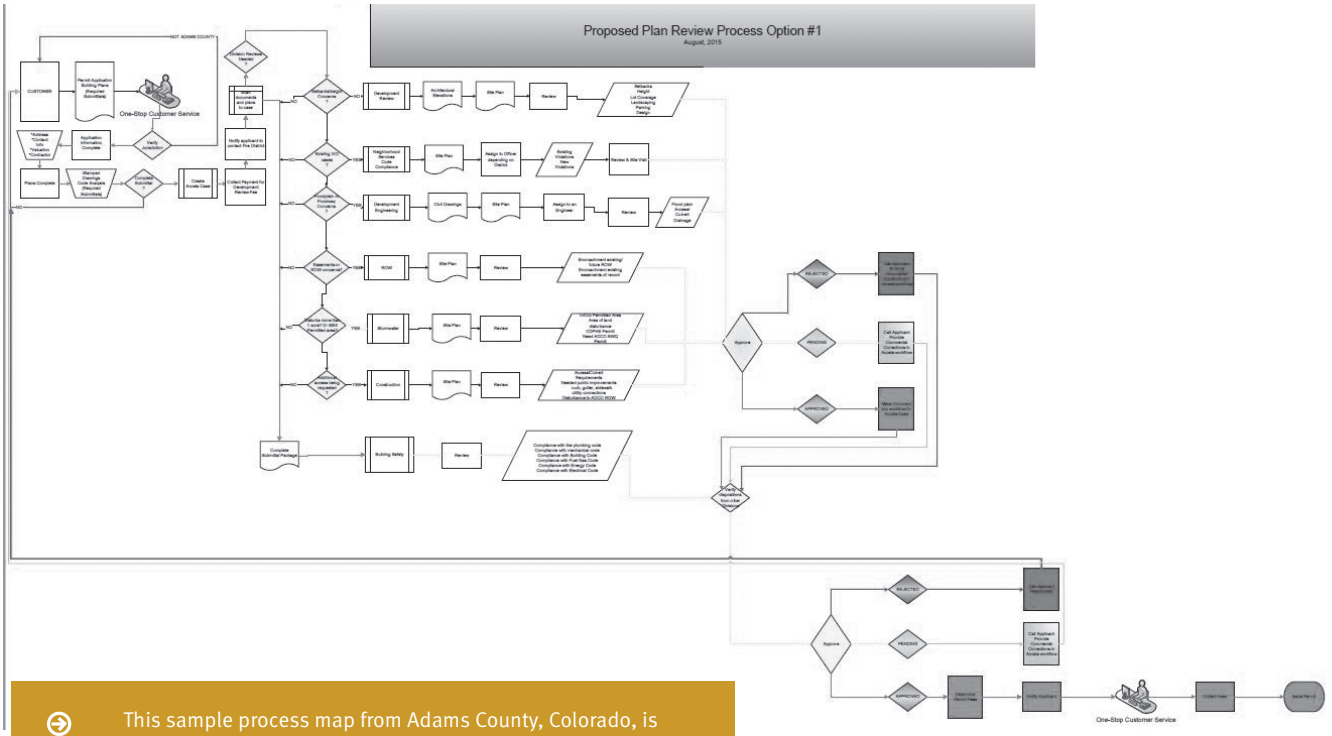
And as mentioned before, the value of these meetings is also built on time. If we failed to send these comments to applicants in a timely fashion, their experiences—and their projects—suffered. Traditionally, we told customers they would receive comments within 14 days. This was the hope but not the internal expectation. Thus the 14 days was seldom met. The time line was more like 70 days on average, which is embarrassing to consider. There were even instances where we didn't send the comments at all!

Mapping the Value

On paper, conceptual review is a small process. But when mapped through the rest of the value chain, it has a tremendous effect on the success of a project. If applicants do not receive a document of consolidated comments in a timely fashion after a conceptual meeting, they often fail to follow the rest of our process effectively. If the applicant does get comments, but they are inaccurate or incomplete or inscrutable, the plight is just as bad.

In every instance, this creates the classic problem of "garbage in, garbage out." Poor guidance leads to poor submittals and poor outcomes. Every planner is keen to this fact, and it makes more work for everyone.

It begs the question: How could something so simple as a conceptual review process be so inconsistent? Was our staff lazy? Irresponsible? Negligent? Like so many facets of work in large organizations, the truth of the



This sample process map from Adams County, Colorado, is significantly more granular than the more common critical path illustration. Each element factors in actions, inputs, conditions for advancing, and decision points. It also contains metadata on how each element is executed.

Adams County, Colorado

matter is that our staff members worked very hard to overcome the poor processes that were not designed to help them succeed. Our process simply didn't make it easy for them to do the right thing. Often, for the sake of delivering value in their jobs, our staff members simply operated outside of the process. They would go out of their way to avoid the process so as to prevent the cascade of bad effects that would follow if they kept to their scripts. This was readily apparent in the third stage of the effort: defining, and improving, our flow.

Achieving Great Flow

The action that best personifies process improvement is the mapping that comes during the flow stage. Symbolized by the flow charts that show the beginning, middle, and end of an effort, most practitioners can easily sketch the basic flow of any process in accordance to the critical path. But a critical path isn't enough to truly understand how your business is operating when it involves multiple people from multiple groups. The real flow from the start to finish of a process is surprisingly complex and full of hidden decisions, conditions, and bottlenecks that no single person can identify on their own. And often, it varies from person to person in the existing condition.

Mapping the flow, especially as it currently exists, requires significant time and effort. It is, essentially, an audit of the team's work: what they do, how they do it, and when they do it. And like any audit, their involvement is critical for success. For a large department such as ours, this meant bringing a staff of more than 20 people to an off-site conference room where they could define every step of the conceptual review process—as it currently exists and as they currently use it—and map the information on a whiteboard for all to see. The work took several hours, and the visual result wasn't pretty. But it painted a very compelling picture.

Within this basic illustration, not only does one find the critical path that serves as the backbone of any process, but also the smaller actions, inputs, and decisions that make it possible. Some of which are inconsistent from one participant to another. It is vital that the exercise of mapping the existing flow highlights these inconsistencies.

For example, the original process for initiating a conceptual review involved a planner receiving the request from an applicant or, more commonly, informing a would-be applicant that it was required. Sometimes, this occurred after a file had already been created in our case management software. If so, the conceptual review meeting was noted in the case file electronically. But not always. Many cases had no record that a conceptual review meeting had ever been conducted since different users acted in different ways without a process to dictate.

Even the simple matter of scheduling the meeting was often different from user to user. Some planners would schedule the meeting themselves in Microsoft Outlook. Others would ask a permit technician to schedule the meeting for them. And again, some would not schedule the meeting at all; they would adhere to the department's standard time for these meetings (Monday afternoons) but hold the meeting in any conference room that was available. In the grand scheme, we've hardly scratched the surface on the rest of the process and already find inconsistencies throughout.

One important note is that this effort can and should be categorized as a "blame-free autopsy." This is process improvement,

Elements of Value	Key Performance Indicators	Benchmark
(Quality) Comprehensive Comments	Percentage of staff participation from all divisions	100% on all documents
(Quality) Clear Language	Percentage of comments that provide citation or definition	100% on all documents
(Quality) Chronological	Percentage of comments completed with template	100% on all documents
Timeliness	Percentage of comments delivered within 14 days	100% of all review cases

not process disparagement. When teams get together to discuss this work, they often feel a sense of guilt at how convoluted the system has become. They think it's their fault. But unveiling all the hidden machinery and small foibles is vital to understanding how everything can work better. So as the staff members work to define their process—as it is, not as it should be—the conference room can start to feel more like a confessional. But again, as a "blame-free autopsy," this is a critical step to everyone's progress as part of a team. Not a time to point fingers.

When the various actions are defined and the map is clear, the next step is a return to the principle of value mapping. Only, in this case, the value mapping is far more fine-grained. Here, the team begins to analyze the dysfunctional process they see before them. They look at every step and consider whether it is worth keeping. Like editors searching for the next unnecessary adjective, the team becomes ruthless, cutting what isn't needed and keeping only that which is truly, deeply valuable.

Value in this much smaller sense goes back to the notion of the critical path. Not the more simplified version of "the big picture" but a version that shows how every step creates an action that gets the client closer to what they want: the final output. In our case, the final output is the timely delivery of a set of complete, consolidated, and chronological comments. If the team agrees that a certain step gets them closer to what the client wants, it is marked with a "Value-Added" designation.

Processes also have steps that are necessary even if they do not get a client closer to what they want. Such steps are marked as "Business Value-Added" in the sense that our work cannot function without certain actions taking place. In the instance of conceptual review, a prime example is the act of inputting one's comments into our case management system (Clayton n.d.). This does nothing for the client (they don't have access), but it is necessary for the business.

Every other remaining action is marked with a "Non Value-Added" (NVA) designation. One of the more satisfying aspects of this work is looking back at the number of NVA actions that are found in every original process map. This is the stuff of red tape bureaucracy and bad customer service. Each NVA item is removed from the future process, liberating staff and clients from things they never wanted to do in the first place.

Altogether, the value-, business value-, and non-value-added items are compiled by percentage so that one can see the overall picture of what often occurs in a process. It's not uncommon to find a development review process that has more than 50 percent of its actions classified as non-value added. Removing those items cuts a job's demands in half—an incredible improvement. In the case of our conceptual review process, we discovered 44 percent of all actions were unnecessary. On our other bookend, building permit review, we eliminated and revised even more steps, reducing our time line by 71 percent.

What's left is the lean, efficient process that the team has defined by simple subtraction. The team is thus a veritable Michelangelo, freeing the sculpture from the surrounding marble. As a result of their collaboration, they can understand the new process in a deep way that compels them to use it together in a consistent manner that imbues great team spirit. People are often excited to go back to work and try it. But a process, no matter how lean, can't be deemed effective until you know what you're trying to accomplish.

Establishing Pull

The old adage is true: What isn't measured isn't managed. And if value is determined by the quality and timeliness of what we deliver, we need to create measures that can help us create maximum value. One such measure should represent the quality element and another measure should represent timeliness. Working with your staff to establish these two measures together, collaboratively, is the key to creating ownership and buy-in.

In our case, we knew that quality was best achieved when we delivered comments that were comprehensive, clear, and chronological. We knew timeliness was best achieved when comments were delivered within 14 days. The table at left illustrates our basic KPIs.

Our new process ensures these benchmarks are met by establishing pull. We've designed a process that can easily ensure we "pull" our product through in a timely fashion, as demanded. But only to a certain extent. We don't have capacity to meet all possible demand. If we were to receive, say, 10 conceptual review meeting requests for a single week, and these requests were pulled through the process at the same time, we'd probably see quality suffer. We simply wouldn't be able to coordinate in a way that has everyone in the room consistently for those meetings. So instead, we set a cap based on time and space. We reserve a single conference room for four hours a week on Monday afternoons. This typically serves four such meetings a week. This allows our staff to coordinate their time, keep the meetings in a consistent space, and thus have all the critical elements up front for the rest of the process to be a success.

In order for applicants to receive the value we can offer in the time they deserve, we must adhere to this basic capacity limit. That's what establishing pull is all about. Backlogs can happen as a result, but that's a result of excess demand for the process, not excess waste within it—a critical difference.

Continuous Improvement

But these capacity limits don't last forever. The most enjoyable aspect of process improvement is that it ingrains a new way of

thinking that eventually leads to more improvements over time, especially to the "flow" of your team's work. Case in point: Our team found immediate success with their new process, hitting all benchmarks effectively. A few cycles into the effort, they began to capitalize on the rest of our case management software to standardize certain comments for certain case types. This was another big gain in efficiency. Now all conceptual review comments are easily delivered on time—with plenty to spare. This gives us the chance to either lower the time standard from 14 days to 10 or expand capacity by raising the cap on weekly meetings from four to six, having shorter, more efficient, use of the meeting time. With more refinements to our case management software, we suspect we'll simply do both.

In this mindset of continuous improvement, we've applied our approach to many other cases and processes. For example, with our other target process—building permits—we have further capitalized on our software capabilities to create what's known as the E-Permit Center. At this web portal, clients now submit their applications for all building permits and many other permits and applications online in a paperless system. This system is designed so that we can deliver all plan reviews within 10 days. This is a 200 percent improvement in efficiency from past efforts. Additionally, with these and other processes, we've begun to assess our performance from the client's standpoint. In our monthly polling, we achieve an average 90 percent customer satisfaction rating per month—a first for our organization.

We monitor these and other such processes each month with a performance report that highlights the effectiveness of our work. These reports are something of a scoreboard for our staff, letting them know when and how we're winning the game—and the work often does feel like a game when you have feedback of this sort. We also communicate these reports to the public so they can see how we're best serving them.

CONCLUSION

Though it often appears that the major impact of zoning is felt on the policy side, there is little doubt that much of the pain is felt—especially by practitioners—on the administrative side. And though policy can take years to develop and more years to truly apply, there is much we can do on the administrative side today that can create benefits almost immediately. Anything that allows our staff to do their jobs quicker, better, and easier is positive for all. And quite gratifying, too. Practicing process improvement can alter the public's view of our work, can build credibility in our profession, and can lead to great decisions.

To that point, there is one final improvement we've noticed in our efforts. As highlighted in the White House report, the greater quality and timeliness of our procedural work extends benefits to our non-procedural work. In the past year, we've gained more time for the analysis of public hearing cases and major development decisions. This process has led to greater influence with our boards and elected bodies so that over 90 percent of their decisions are in agreement with our recommendations. We thus have more credibility. And elsewhere, we now have better relationships with developers, community leaders, and the broader public. It's been a surprise, all this fanfare.

Most surprising of all, the approach detailed here has made the work exciting, too—especially when it involves actions we can take quickly, on our own, with immediate feedback. This is something we all need in our zoning practice.

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HOW EFFICIENT ARE YOUR DEVELOPMENT REVIEW PROCESSES?

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