



EAB

# Process Improvement Primer

Resources for Simplifying, Standardizing, and Transforming Administrative Work

Business Affairs  
Forum







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Resources for Simplifying, Standardizing, and  
Transforming Administrative Work

# Business Affairs Forum

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# Supporting Members in Best Practice Implementation

## Additional Resources Available Within Your Membership

This publication is only one of many resources the Business Affairs Forum offers to assist members in improving operational efficiency. Here, we focus on the nuts and bolts of process improvement—but we see this activity as part of a larger push. Institutions pursuing efficiency are seeking streamlined work, standardized activities, and organizational scale.

Recognizing that ideas seldom speak for themselves, our ambition is to work actively with members of the Business Affairs Forum to decide which practices are most relevant for your organization, to accelerate consensus among key constituencies, and to save implementation time. Embedded within this study are many checklists, templates, tools, and other resources—we welcome any queries about their use or any stories of success in their use on your campus.

We offer a variety of services to help your institution realize its mission. For additional information about any of the services detailed below, please contact your organization’s relationship manager or visit our website at [eab.com](http://eab.com). To order additional copies of this publication, please search for it by title on [eab.com](http://eab.com).

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Members may contact the consultants who worked on any report to discuss the research, troubleshoot obstacles to implementation, or run deep on unique issues. Our staff conducts hundreds of telephone consultations every year.

### Facilitated On-site Presentations

Our experts regularly visit campuses to lead half-day to daylong sessions focused on highlighting key insights for senior leaders or helping internal project teams select the most relevant practices and determine next steps.

### Related Publications

Members may access studies online or order hard copies in unlimited quantity. The reports listed below relate to themes addressed in this Process Improvement Primer.

- Selecting Core Performance Metrics
- Structuring and Transitioning to Impactful Gainsharing
- The High-Efficiency HR Department
- Efficiency and Effectiveness Initiatives
- Making the Case for Shared Services



To access the full range of services available to you, please visit our website at [eab.com/BAF](http://eab.com/BAF).

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# So You're Ready to Fix a Process

In an era of constrained budgets and ever-increasing support and compliance responsibilities, leaders in higher education administrative units are seeking gains in efficiency. Colleges and universities are losing patience with paper-based processes, shadow systems, duplicative tasks, unnecessary handoffs, and redundant approvals, all of which waste valuable resources that could otherwise be devoted to more strategic activities that advance the institutional mission.

“

We need to simplify processes because that's our responsibility—every time we have an inefficient process, there's a student or parent who is taking on another job, or delaying retirement, or taking out a second mortgage on their house. **They're paying for our time, and they're paying for our processes.**

Chief Business Officer

Public Research University

”

Process improvement offers a straightforward approach to assessing and redesigning administrative work, whether hiring and paying employees, procuring equipment and supplies, or setting up research grant accounts. Regardless of the particular process, the steps for improving it are the same—and they are outlined in the following pages, without any unnecessary jargon.

Veterans of process improvement initiatives attest to the positive results of reengineering the work crisscrossing campus: error reduction, risk mitigation, greater staff capacity and morale, and improved customer satisfaction, just to name a few. The step-by-step guides and resources in this primer are designed to help your campus realize these objectives and lay the foundation for a culture of continuous improvement.

## Overview of This Playbook

- 1** **The first section** provides a detailed guide for process improvement teams. Walking through these five steps will help you tackle a single process improvement project, whether for the first or fiftieth time.
- 2** **The second section** includes resources that will help a process improvement coordinator secure greater stakeholder engagement and cultivate a continuous improvement culture on campus.
- 3** **The third section** consists of a compendium of process improvement success stories. These real-life examples can prompt you to consider how common problems and solutions might play out in your local context.





# Process Improvement Playbook

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SECTION

1

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# Your Step-by-Step Guide to a Better Workflow

## Before Breaking Out the Post-It Notes, Start Here

**This section provides detailed instructions for improving a single process.** The five steps presented below form the core of this playbook. They are distilled from EAB’s analysis of dozens of process improvement approaches in both higher education and the private sector. As your campus becomes more experienced in its process improvement journey, you may supplement this playbook with homegrown tools and resources—but these five steps should always remain your baseline.

### The Process Improvement Playbook

- 1 Assemble the right people
- 2 Map the current state
- 3 Collect current-state data
- 4 Design the future state
- 5 Develop an implementation plan

*As you prepare to run this playbook, keep the following considerations in mind:*



Selecting processes to improve should blend executive, staff, and strategic inputs. The Redesign Prioritization Tool can help—download it at [eab.com/baf/processimprovement](http://eab.com/baf/processimprovement).



Each of the steps in this section includes guidance for who should be involved, how to complete the step, and when you know to move on.



If you’re leading this initiative, be sure to review the second section, Process Improvement Coordinator Resources, on page 27, for help getting started.



If you need a reminder of other institutions’ success stories, check out the Process Improvement Compendium in the third section of this playbook.



Electronic versions of the resources in this primer—including an infographic of the steps above—can be found at [eab.com/baf/processimprovement](http://eab.com/baf/processimprovement).



It will take determination, tenacity, and a lot of coffee to sort through the tangles embedded into these processes. This work might not be easy—but it’s worth it.

# Step 1: Assemble the Right People

## Owner

- Executive sponsor and/or process improvement coordinator

## Stakeholders

- Possible team members
- Managers of team members

## Time estimate

- 1-2 weeks

## Guidance

- Secure manager approval when recruiting team members
- Organize a team kickoff meeting to discuss expectations and explain the scope of work

**You know you can move on when** a team made up of five to eight people representing a variety of perspectives on the process has been assembled.

## Gut check for step owner

- Will there be someone in the room familiar with each major component of the process, from start to finish?
- Have you communicated the time and work expectations to each participant, as well as to managers?
- Is manager approval more likely to be granted when requested by the team member, the process improvement coordinator, or the executive sponsor?

## Goal: Process Improvement Team Roster

In carrying out process improvement work, the most successful institutions bring together cross-functional teams made up of people with different perspectives and approaches—but all committed to making a process simpler, more standardized, and beneficial to the customer.

Process improvement teams are tasked with mapping the current state, collecting as-is data, redesigning the process, and developing and implementing an action plan for reaching the future state—in other words, the remainder of the steps in this playbook.

**Ideally, teams should have between five and eight people.** The executive sponsor, in conjunction with the process improvement coordinator, should use the team roster on the next page to select “essential” team members, leaving room around the table for other candidates if the process or solution under consideration would benefit from their input and expertise.

Remember that the members of the process improvement team will likely change for each process you redesign. While the roles described on the next page will be the same, **you will want to find the right people who understand the particular process under consideration.**

### A Note on Scheduling

Process improvement team sessions—the gatherings in which you will walk through Steps 2-5 of the Process Improvement Playbook described on the following pages—usually take one of two forms:

- 3-5 back-to-back daylong sessions (usually for shorter, less complicated processes)
- 1-2 daylong sessions per week across several weeks (usually for more complicated process requiring data collection and stakeholder interviews and engagement between each session)

While there’s not one “right” way to schedule working sessions, assembling all team members in one place for the duration of the process improvement work is absolutely necessary. The project sponsor should help clear roadblocks when needed.

# Process Improvement Team Roster

## Essential Team Members

Perspective	Guidance	Names
Process improvement coordinator	If your campus does not have a dedicated process improvement coordinator, the executive sponsor should designate a team member to facilitate the remaining steps of the playbook. See Section 2 of this primer for additional resources.	
Process customers (1-2 people)	Customers may interface with the process at its beginning or end (e.g., requesting a work order or receiving some form of payment); their perspective is crucial.	
Unit-based individual contributors (1-2 people)	These team members contribute to some part of the process from a campus unit. Including more than one unit-based contributor can help determine whether work is done differently across campus.	
Central office individual contributors (1-2 people)	These team members operate out of a central office (e.g., Finance or HR) and often perform process steps after a handoff from decentralized units.	
Process manager (when applicable)	A process manager, such as a school business officer or a central department manager, can provide an end-to-end perspective on the entire process that individual contributors may lack.	

## Additional Candidates

Perspective	Guidance	Names
Subject-matter experts	Depending on the process, you may need to consult with legal, audit, or regulatory experts when designing the future state.	
Technology experts	These experts can support the creation of IT solutions and explain the limitations of current capabilities. Some campuses invite IT representatives to the conversation only after redesigning the process to avoid presupposing technology solutions.	
Faculty members	When improving processes that intersect with faculty workflows, faculty participation is critical. Scheduling may be difficult for these types of projects, but the presence of faculty at each session is necessary for securing long-term buy-in.	

# Step 2: Map the Current State

## Owner

- Process improvement coordinator

## Stakeholders

- Process improvement team

## Time estimate

- 2-4 sessions, 3 hours each

## Guidance

- Begin with a high-level process map of 5-7 steps
- Use the guidance across the next pages to dig deeper
- Flag opportunities for improvement—but do not focus on the fix yet
- Resist the urge to downplay problems you uncover
- Bring in outside perspectives and audiences as necessary to confirm the map
- Mapping software can be helpful in capturing the final version—but post-it notes and markers are best during the mapping process

**You know you can move on when** the team agrees that the map reflects the reality of the process in its current state.

## Gut check for step owner

- Have I reserved sufficient space and time for the process improvement team to work uninterrupted?
- Have we created this map without blame and ensured that all voices are heard, regardless of seniority?

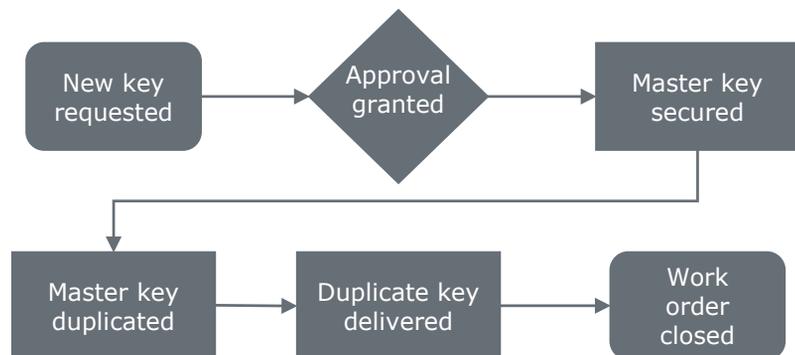
## Goal: Understanding Your As-Is Process

Mapping the current state of the process under review requires the expertise of your process improvement team. **Together, you will articulate what actually happens on your campus today along every step of the process.** You may discover that some units do steps differently or that off-the-books work-arounds, shortcuts, and shadow systems are involved. Note these instances as areas for improvement. Keep an eye out for overtly manual operations as automation opportunities. Record any ideas for use in future-state mapping.

While there is an art and science to process mapping—and there may be people on your team or on campus with that skill set—complete mastery is not necessary. However, between all of the handoffs, decision points, and units involved in complex processes, mapping can easily become overwhelming. If you are new to this step, follow the guidance across the next several pages.

### i. Draw a high-level map consisting of 5-7 steps.

The goal is to understand where the process under review begins and ends and the general path that the work travels. Below, see a sample high-level map for requesting the duplication of a physical key from Facilities. Stick to the most commonly used symbols below the sample map.



### Commonly Used Mapping Symbols



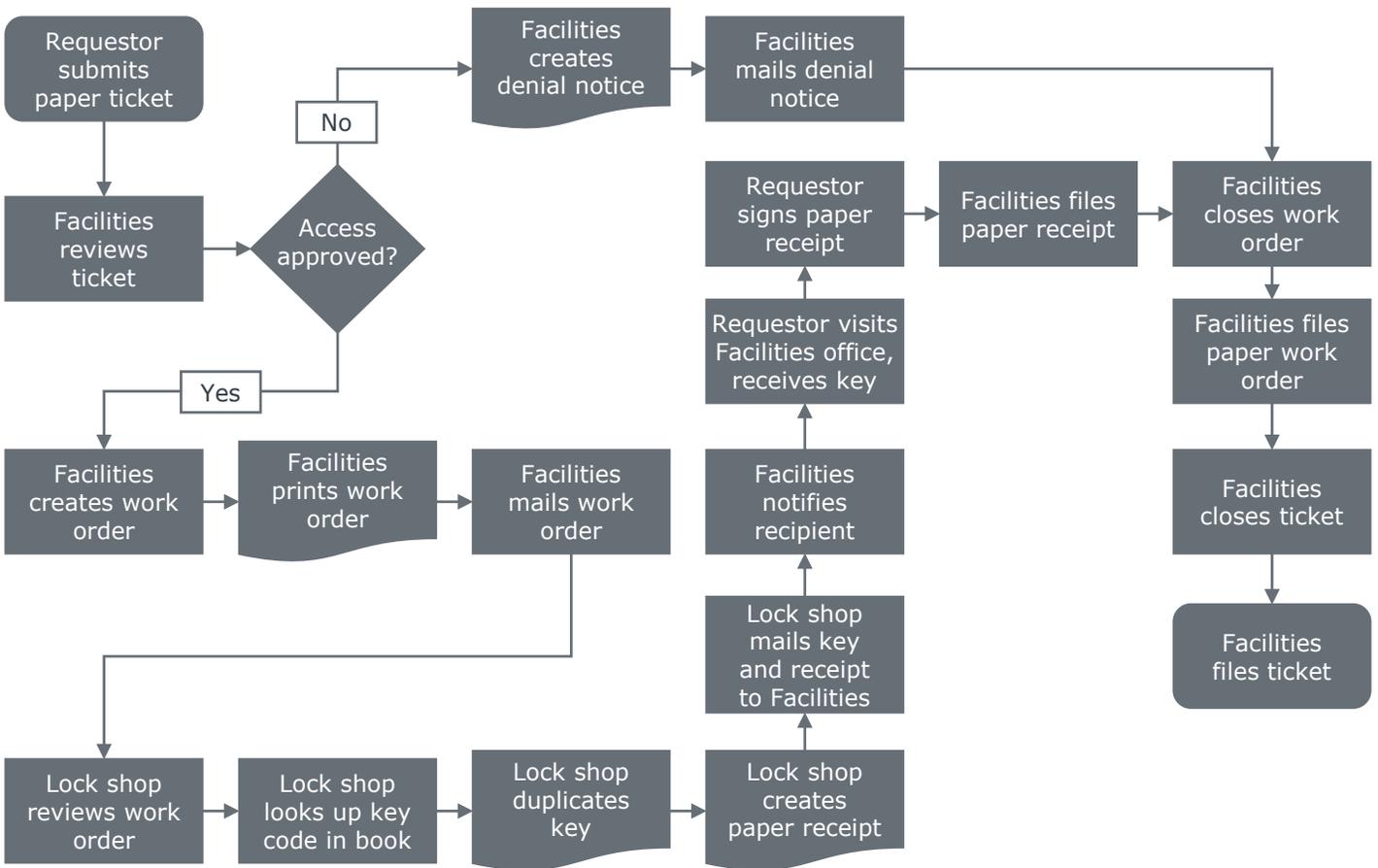
# Process Mapping Tools and Suggestions

## ii. Drill down to a comprehensive understanding of every process step.

Now, use the same symbols to go a level deeper. Below, see a more detailed sample process map for the same task of requesting the duplication of a physical key from Facilities. In this phase, consider the following questions:

- What prompts an individual step to begin and end?
- Who owns each process step? Who else is involved?
- What inputs and outputs are necessary for each step?

### Sample Current-State Process Map: Obtaining a Physical Key for Building Access



## Process Mapping Tools and Suggestions (cont.)

### iii. Ask critical questions while compiling the current-state map.

As you assemble the current-state map, some obvious opportunities for improvement will likely become apparent. Others will require more nuanced analysis of the process in front of you. Consider the following questions to keep one eye looking forward to the improvements that will come later.

Questions to Consider While Mapping
Why is the step necessary?
What other steps rely on the step?
What value does the step provide?
What data from this process interfaces with other processes on campus?
What work-arounds, shortcuts, duplicative work, and shadow systems are necessary to complete the process?
How and why does the process vary across campus?

### iv. Apply judgment to each process step.

For more advanced process improvement teams, you can add supplementary annotations to the current-state map to provide greater detail about the value (or lack thereof) for each process step. Incorporating the following abbreviations can accelerate your ability to collect current-state data in Step 3 and design future-state improvements in Step 4.

- CV (Customer Value)—this step is necessary to meet external customer demands and expectations
- BV (Business Value)—this step is necessary for internal business operations
- NV (Non-Value)—this step wastes resources and meets neither customer nor business needs
- C (Compliance)—this step is necessary due to compliance or other regulatory considerations
- R (Rework)—this step has already been performed but must be repeated because of mistakes or incorrect information
- B (Bureaucracy)—this step adds unnecessary complexity, approvals, or processing
- D (Duplication)—this step is unnecessary and is already performed elsewhere in the process

# Step 3: Collect Current-State Data

## Owner

- Process improvement coordinator

## Stakeholders

- Process improvement team

## Time estimate

- 1-2 sessions, 3 hours each

## Guidance

- Select one or two KPIs tied to the part of the process that needs the most improvement
- Review the sample baseline metrics on the right side of this page for inspiration
- For extremely broken or paper-based processes, some estimation or manual collection of current-state data may be necessary
- Use the template on the next page to develop a plan for recording baseline data
- Consider designating one team member as the data point-person

**You know you can move on when** the team agrees on and has accurate data for the process steps in greatest need of improvement.

## Gut check for step owner

- When I am asked to justify this process improvement project in one year's time, will my baseline data stand up to scrutiny?
- Is the data relevant to the parts of the process we plan to improve?

## Goal: KPIs for Every Process Improvement Project

Upon mapping the current-state process, opportunities for improvements will likely become apparent, particularly if you used some of the "additional annotations" guidance in the previous step (if not, consider going back to add them). Before rushing toward solutions, though, you must collect baseline data on the process, whether articulated as a measurement of throughput, customer service quality, error rate, or another metric. **This step is critical for demonstrating progress and getting credit for your work upon introducing the future state.**

Consider the common metrics below as possibilities for data collection. Not all of these key performance indicators (KPIs) will be applicable for each process. The data collection worksheet on the next page will help you collect process data in a more systematic way.

### Sample Baseline Metrics



Lead time (total start-to-finish time)



Cycle time (total working time)



Backlog (tickets or activities not yet initiated)



Volume of work



Response/resolution time



Number of steps



Number of handoffs



Number of loop-backs



Number of decision points or approvals



Customer satisfaction



Frequency of rework



Number of errors



Cost of the process

# Data Collection Worksheet

Guiding Questions	Process Metric 1	Process Metric 2
What specific metric are you measuring?		
What method will be used to collect data?		
When and how frequently will data be collected?		
Who will collect the data?		
What steps should the owner follow to collect the data?		
What skills or considerations are necessary to collect the data?		
How will data quality and completeness be ensured?		



**Remember—baseline metrics should be...**

- Tied to the part of the process being improved
- Measurable, expressed in an equation, and simple
- Aligned with business objectives
- Tracked at a proper frequency
- Expressed graphically over time

# Step 4: Design the Future State

## Owner

- Process improvement coordinator

## Stakeholders

- Process improvement team

## Time estimate

- 2-3 sessions, 3 hours each

## Guidance

- Determine whether your team will take a greenfield approach to designing solutions or iterate upon the existing process
- If iterating upon the existing process, teams should keep an eye out for the four most common problems, described across the following pages
- Use the same process-mapping symbols that you used in Step 2

**You know you can move on when** the team agrees on the future-state process map.

## Gut check for step owner

- ❑ If IT experts have not been involved up to this point, have I invited them to the table to understand where technology solutions can help achieve an ideal end state?

## Goal: Determining How the Process Should Work

At last, the fun part. Designing and mapping the future-state process seeks to generate an ideal scenario for the who, what, where, when, and why of a process. Whether you are removing, reordering, reassigning, or even adding steps, the goal is to create a better way to get the job done.

Some campuses may pursue a “greenfield” approach, in which a team designs a process from scratch. Another way is to assess the current process for reengineering opportunities. In that case, teams should walk through each step of the process, using the questions below to test opportunities for improvement.

### Based on inefficiencies identified in the current-state map, what steps...

Can be eliminated?

Can be combined with others?

Can be performed in parallel?

Take too long?

Require unnecessary approvals?

Could benefit from technology solutions?

### Considering the perspective of customers and end-users, what steps...

Are necessary due to customer demand or need?

Need to be added to provide greater customer guidance?

Can be simplified for the customer’s benefit?

Are necessary because of legal or regulatory requirements?

Can be moved to an electronic form for the customer’s benefit?

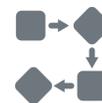
## Common Problems, Common Opportunities

Many inefficiencies stem from a common set of problems. Teams new to process improvement should keep an eye out for the following four opportunities. Guidance for realizing these opportunities is presented on the following pages.



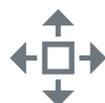
### Opportunity #1: Reduce Unnecessary Steps

Eliminate duplicative or non-value-added steps to free up time and capacity



### Opportunity #2: Parallel Processing

Complete prerequisite steps concurrently to expedite the process



### Opportunity #3: Batching

Rearrange and resequence task order by unit ownership to avoid fragmentation



### Opportunity #4: Shared Services

Transactional activities completed in low volumes consolidated into one unit

# Opportunity #1: Reduce Unnecessary Steps

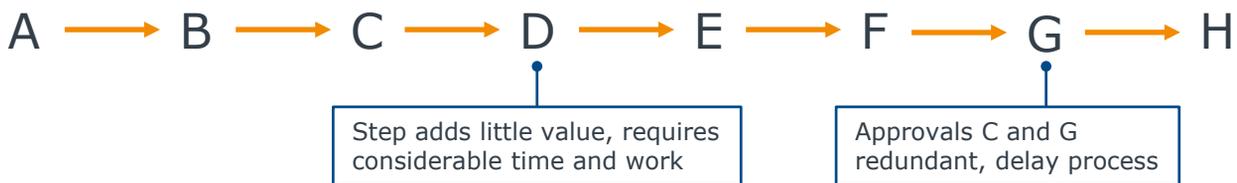
## Identify and Eliminate Low-Value, Redundant Process Steps

An overabundance of steps creates bottlenecks and inefficiencies. Removing process steps reduces the total amount of work staff must perform, accelerating the process and freeing up time for other work. Eliminating steps is also likely to reduce the number of handoffs, particularly when eliminating approvals from otherwise uninvolved staff.

There are two types of process steps to target for elimination, illustrated below. First, reduce steps that add little value to the overall process yet consume significant staff time. Second, eliminate redundant steps, such as duplicative approvals.

### Representative Model for Step Reduction Within a Process

*Sample Process Before Redesign*



*Sample Process After Redesign*



# Opportunity #1: Reduce Unnecessary Steps (cont.)

## Use the Approval Audit to Assess the Usefulness of a Step

At most institutions, duplicative approvals represent the largest opportunity to eliminate unnecessary or redundant steps—particularly when approvers are otherwise uninvolved in the process itself.

**The approval audit below will help process improvement teams determine what qualifies as a low-value or redundant approval.** Answer the following questions regarding approvals in processes undergoing redesign. The greater the number of “yes” responses, the greater will be the opportunity to reduce the number of approvals in the given process.

### Process Improvement Tool: Approval Audit

<b>1 Consider Standards Set by High-Functioning Units</b>	<b>Yes</b>	<b>No</b>
• Does the number of approvals required for the process vary across campus units?	<input type="checkbox"/>	<input type="checkbox"/>
• Is the number of approvals required for the process significantly greater than the minimum number of approvals required by campus, system, or regulatory policy?	<input type="checkbox"/>	<input type="checkbox"/>
<b>2 Consider the Position of an Approval in the Process Flow</b>	<b>Yes</b>	<b>No</b>
• Do approvals closer to the end of the process offer little input, guidance, or instruction beyond what has already been contributed by previous approvers?	<input type="checkbox"/>	<input type="checkbox"/>
<b>3 Consider the Reporting Chain of Existing Approvers</b>	<b>Yes</b>	<b>No</b>
• Are process activities relatively standard, requiring little senior-level oversight or intervention?	<input type="checkbox"/>	<input type="checkbox"/>
• Are multiple staff within the same reporting chain required to sign off on various steps within the process?	<input type="checkbox"/>	<input type="checkbox"/>
<b>4 Consider the Risk of Noncompliance</b>	<b>Yes</b>	<b>No</b>
• Is there a relatively low risk of policy noncompliance associated with eliminating approvals for the process?	<input type="checkbox"/>	<input type="checkbox"/>
<b>5 Consider Notifications in Place of Approvals</b>	<b>Yes</b>	<b>No</b>
• Can the process owners shift from seeking approvals to sending notifications of decisions to key constituents?	<input type="checkbox"/>	<input type="checkbox"/>

## Opportunity #2: Parallel Processing

### Conduct Nonsequential Steps in Parallel

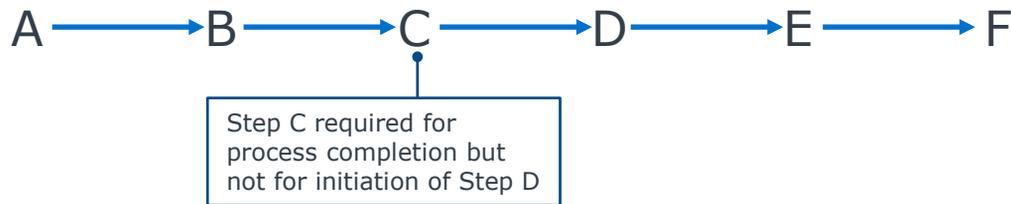
This opportunity is most apparent when staff members needlessly wait to begin a designated portion of process work. The solution is to complete multiple process steps simultaneously. To begin, process improvement teams must distinguish between two types of process steps:

- **Prerequisite steps** that must be completed before the next step can begin
- **Secondary steps** that do not have to be completed in order for the immediately subsequent step to begin. However, secondary steps still must be completed in order to finalize the process.

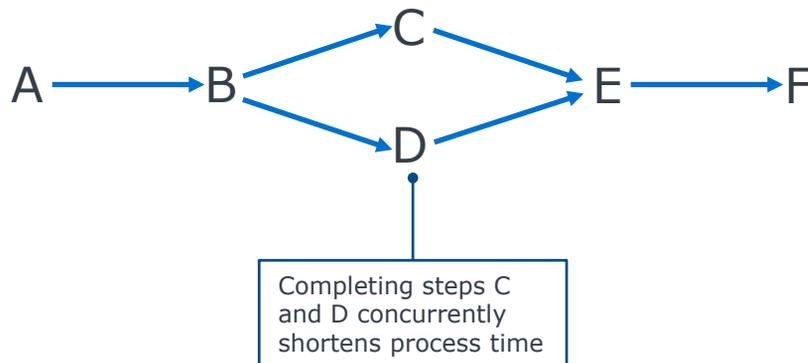
Rather than completing all steps in sequence one at a time, staff can complete secondary steps and prerequisite steps concurrently. This idea is illustrated by the graphic below. Step C is a secondary step because its completion is not necessary to initiate step D. Rather than waiting until step C is complete before beginning step D, the process can move from step B to steps C and D, completing steps C and D in parallel. Parallel processing expedites process completion and shortens the time staff must wait to initiate subsequent tasks.

#### Representative Model for Concurrent Processing

*Sample Process Before Redesign*



*Sample Process After Redesign*



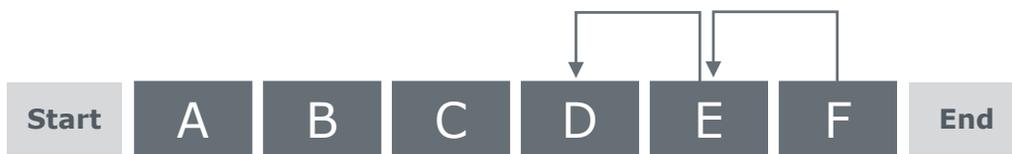
## Opportunity #2: Parallel Processing (cont.)

Parallel processing involves pulling all secondary steps out of the prerequisite task workflow in order to initiate prerequisite tasks as soon as possible. This allows processes to flow more quickly so staff can move on to other job responsibilities. The following guide explains how to identify secondary steps that can be performed concurrently with prerequisite process steps.

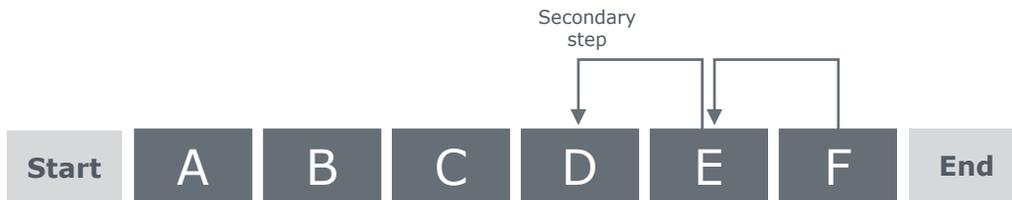
### 1 Identify Secondary Steps

- i. Beginning with the last step in the process, identify whether each step is directly dependent on the completion of the immediately preceding step.

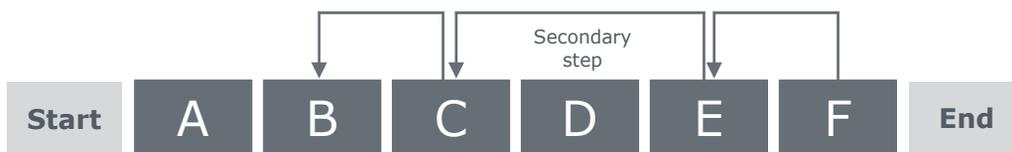
If a step is directly dependent on the step before it, the preceding step is a prerequisite task. Continue working backward until finding a step that is not directly dependent on completion of the preceding step.



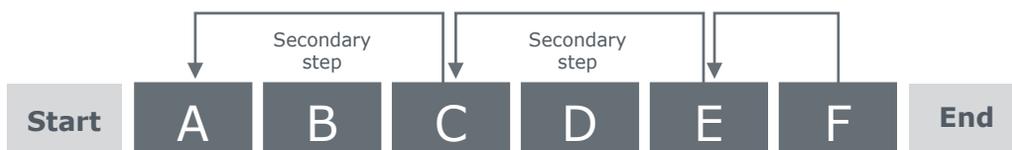
- ii. If the step is not directly dependent on the preceding step's completion, the preceding step is a secondary step. Label it accordingly.



- iii. Returning to the last step in the process, repeat the above exercise, asking whether each step is directly dependent on the preceding step's completion but skipping labeled secondary steps. For example, in the illustration below, ask if step E is directly dependent on step C.



- iv. Continue this exercise, returning to the last step each time a secondary step is identified, until reaching the first step in the process.



## Opportunity #2: Parallel Processing (cont.)

### 2 Determine Secondary Step Dependencies

i. Write all secondary steps identified in Section 1 above the primary process path.



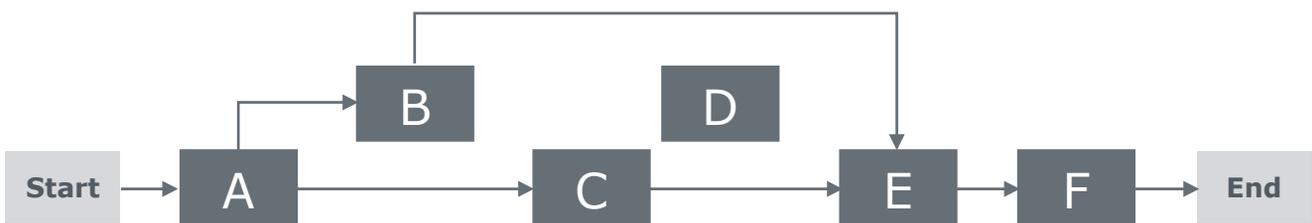
ii. Using arrows, connect all prerequisite steps remaining on the primary process path.



iii. Examining the first secondary step in the process, determine which of the preceding steps are necessary for initiation of that secondary step. Draw an arrow connecting the most immediately preceding step to the secondary step. If no preceding steps are necessary for the initiation of the secondary step, the step can commence at the start of the process. In this case, draw an arrow connecting the secondary step to the start of the process.



iv. Now determine which of the subsequent process steps are dependent upon the completion of that secondary step. Draw an arrow connecting the most immediately dependent subsequent step to the secondary step. If no steps are directly dependent on the secondary step, the step is necessary only for the completion of the process as a whole. In this case, draw an arrow connecting the secondary step to the end of the process.



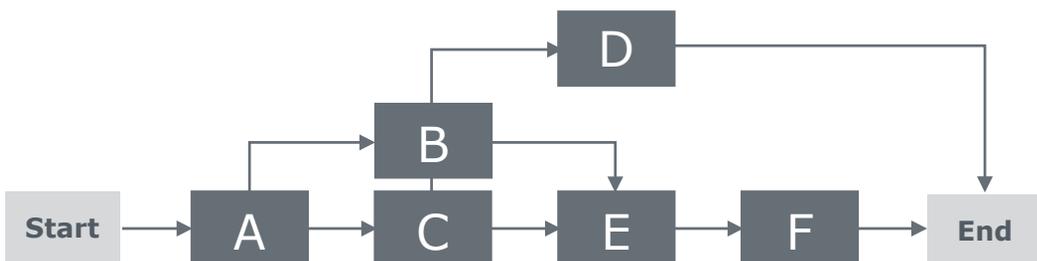
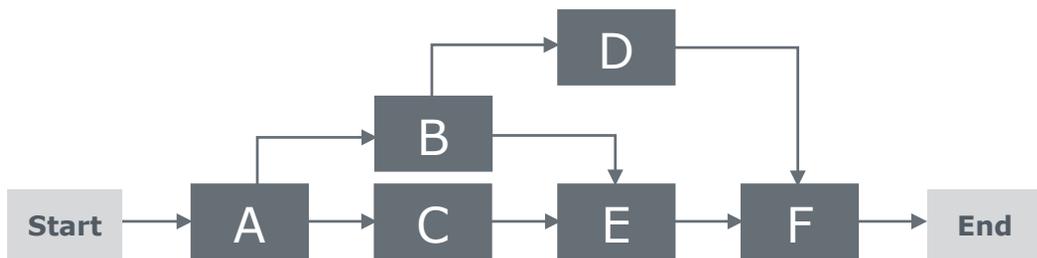
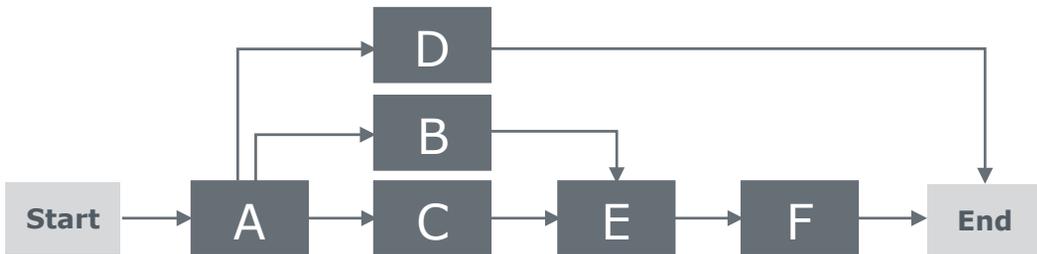
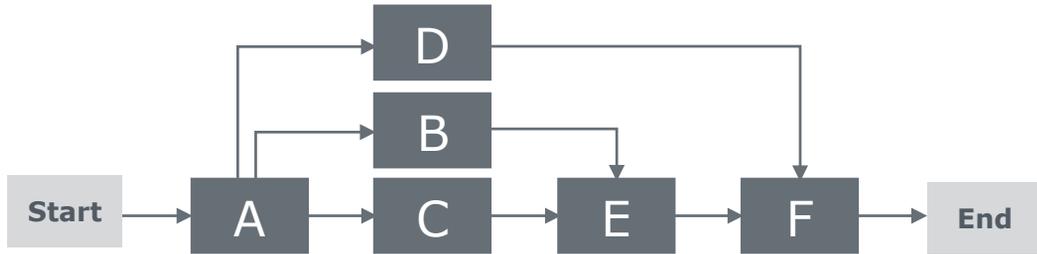
v. Repeat (iii) and (iv) for each secondary step, moving from first to last.

## Opportunity #2: Parallel Processing (cont.)

### 3 Position All Steps So That They Are Preceded by a Task Necessary for Its Completion

Arrange the resulting process map so that secondary steps immediately follow the step necessary for its initiation and sit directly above prerequisite steps that can be processed simultaneously.

Possible sequences based on this example include, but are not limited to:

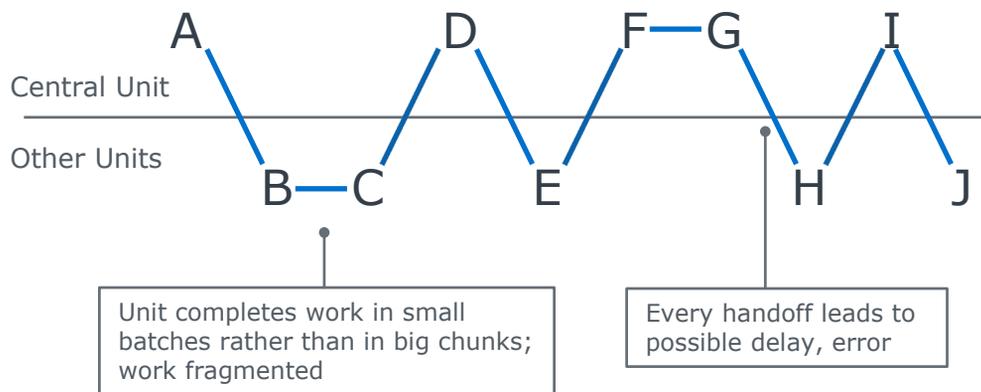


# Opportunity #3: Batching

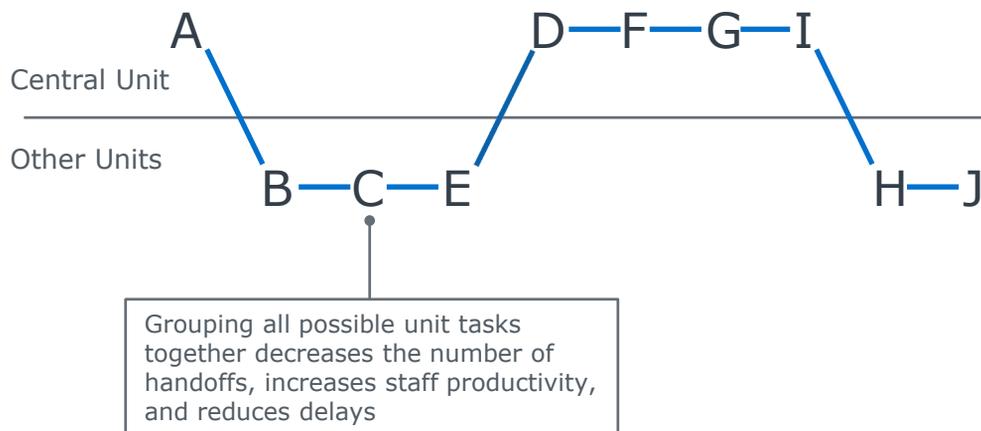
## Rearrange and Resequence Task Order by Unit Ownership

The collaborative nature of business processes requires interactions between many organizational units on campus. However, excessive back-and-forth causes two significant process inefficiencies. First, productivity decreases as staff members complete process work in small batches, switching between the many tasks that need their input, rather than completing as many process steps as possible at once. Second, handoffs increase the likelihood of delays, as lag times and errors can increase each time a process is passed between step owners.

### Sample Process Before Redesign



### Sample Process After Redesign



## Opportunity #3: Batching (cont.)

### Be Aware of the Limits of Rearranging

Grouping and reordering process tasks based on where the actual work is being done can reduce the number of handoffs that contribute to process errors and delays. However, process improvement teams must be cognizant of two limitations to avoid inadvertently creating new process inefficiencies:

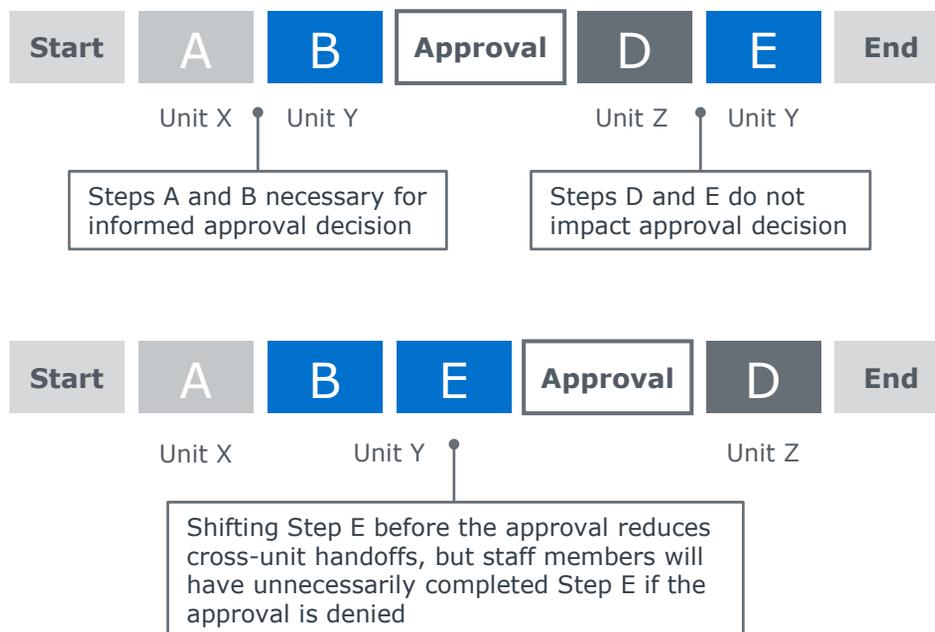
#### ► Prerequisite Process Steps

Some process steps are directly dependent on others or must be completed before others can be initiated. This limits the ability to freely move these tasks within a process. To pinpoint prerequisite steps that are less flexible and secondary steps that can more easily be grouped or reordered, refer to Opportunity #1 and Opportunity #2.

#### ► Approvals

Approval steps in a process can limit the ability to group or reorder other steps within a process. A denied approval can result in the termination of a process prior to its completion. Front-loading tasks that are not necessary for an approval decision increases the likelihood that staff members will dedicate time to a project that will not be approved. Instead, process improvement teams should use approvals as boundaries when consolidating or sequencing process tasks.

As illustrated in the example below, shifting Step E before the approval step would reduce cross-unit handoffs but result in unnecessary work if the approval were ultimately denied. Process improvement teams must weigh the costs and benefits of reordering steps in situations such as these.



## Opportunity #4: Shared Services

### Bring Together Consolidation-Worthy Work to Drive Up Efficiency and Service

When highly complex work is completed infrequently by distributed units, opportunities for error, delays in processing, bottlenecks, and general inefficiencies increase. Grouping the most transactional components of this work into shared service centers or other consolidated units presents opportunities to capitalize on the volume in a way that boosts both efficiency and service levels. In the redesign process, use the following diagnostic to consider processes and sub-processes ripe for consolidation.

#### Process Improvement Tool: Consolidation Diagnostic

Processes and sub-processes for which you can check “yes” in six or more of the categories are likely to be good candidates for consolidation when building out the future-state process.

	Question	Check Yes
<b>Efficiency</b>	Is the process transactional in nature?	<input type="checkbox"/>
	Is the process complex and performed infrequently enough in the unit that scale would improve competency?	<input type="checkbox"/>
	Is there financial benefit to service delivery at scale?	<input type="checkbox"/>
	Does it have high transaction volume across different units?	<input type="checkbox"/>
	Can it be easily standardized or automated?	<input type="checkbox"/>
	Is the service need similar across a significant portion of campus?	<input type="checkbox"/>
<b>Service</b>	Does the process fail to meet baseline service levels now?	<input type="checkbox"/>
	Is campus dissatisfied with the current mode of service delivery?	<input type="checkbox"/>
	Would consolidated staff have the capacity to easily tailor the process to any principled customization needs?	<input type="checkbox"/>
	Is providing this service core to the institutional mission?	<input type="checkbox"/>
	Can transactions be completed without frequent face-to-face communication or knowledge of individual customers?	<input type="checkbox"/>

# Step 5: Develop an Implementation Plan

## Owner

- Process improvement coordinator

## Stakeholders

- Process improvement team
- Process users
- Executive sponsor

## Time estimate

- 2-3 sessions, 3 hours each

## Guidance

- When introducing change, there is no such thing as too much communication
- Keep an eye out for discrepancies between system, campus, and department policies
- Articulate improvement proposals in terms of institutional goals and priorities
- Reconvene the process improvement team at 30-, 60-, and 90-day intervals to assess progress

**You know you can move on when** the process improvement team and executive sponsor have approved an implementation plan with clearly defined roles and responsibilities.

## Gut check for step owner

- Does your plan include a clear way to track progress toward goals?
- Have you assigned ownership to each component of the plan?

## Goal: Account for Campus Impacts

After you have designed the future state, you need to create a plan for how to get there. The scope of this plan will depend on the complexity of the process you have improved and how many departments are involved. **In developing the action plan, continue to communicate with your executive sponsor, who can offer guidance, approve resource needs, and clear roadblocks.** Consider the four areas below as a starting point.



### Policy

- What current policies need to be enforced or changed?
- What new policies need to be created?

*Possible action steps:*

- Carry out a policy audit and revise policies where needed
- Increase dollar-amount approval thresholds so that approval steps are less frequently triggered



### Technology

- What digitization, automation, or other solutions are needed?
- What data measurement systems can be utilized or introduced?

*Possible action steps:*

- Consult IT experts about utilizing existing resources or building new resources
- Replace paper forms and documents with electronic versions



### Staff Engagement

- What additional training would help employees learn the process?
- What management tools can prevent staff members from reverting to the old process?

*Possible action steps:*

- Embed training in new hire onboarding
- Stand up a rewards or recognition program to publicly praise units that are succeeding with the new process
- Institute written guidelines that managers can fall back on to reinforce the necessity of using the new process



### Communication

- Who will be affected by or need to know about the changes (students, staff, customers, faculty)?
- What is the best medium with which to share this information?

*Possible action steps:*

- Capitalize on team members to help with grass-roots communication
- Develop website or other on-demand tools with FAQs, explanations of the changes, and documentation from process improvement work
- Schedule regular meetings with stakeholders to ensure support



# Process Improvement Coordinator Resources

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SECTION

2

- Meet the Process Improvement Coordinator—p. 28
- Resource 1: Quick-Start Project Template—p. 29
- Resource 2: Project Charter Template—p. 33
- Resource 3: Final Report Template—p. 36
- Resource 4: Additional Process Improvement Reading—p. 38

# Meet the Process Improvement Coordinator

## Accelerate Progress with Dedicated Staff Investments

If you have been handed the mantle of serving as a process improvement coordinator for your campus, congratulations! This section is for you. Your time and attention can amplify the likelihood of successful process improvement projects. Depending on the complexities of the project, additional legwork may be necessary to:

- Secure buy-in from stakeholders;
- Ensure that team gatherings run smoothly; and
- Bring the future-state process to fruition with the necessary financial, technological, and staffing resources.

### Resources in this section:

- 1 **Quick-Start Project Template** to help you plan for the full cycle of the process improvement project
- 2 **Project Charter Template** to help you secure buy-in from stakeholders and scope the project boundaries
- 3 **Final Report Template** to help you show the benefits of process improvement
- 4 **Additional Process Improvement Reading** to round out your understanding of improvement approaches

Eventually, your campus may decide to dedicate full-time resources to coordinating process improvement activities. Private-sector experiences affirm this approach: **although 75% of companies are pursuing some kind of process improvement work, only 10% achieve expectations without dedicated resources.** The dividends of designating a coordinator are clear, offering:



#### One-track mind

Focuses on strategic priorities without getting bogged down in other responsibilities



#### Silo-busting authority

Enables an end-to-end perspective beyond the blinders of any one unit



#### Local expertise

Ensures long-term benefits by developing local expertise and partnerships

### What's in a Name?

Local culture will dictate how to brand your institution's approach to process improvement. As seen in the list below, campuses have used the opportunity to set a particular tone for their objectives—and create a common language for the entire campus to speak when it comes to improvement.

*Sample campus nomenclature for process improvement:*

- Process optimization
- Process troubleshooting
- Business process reengineering
- Business practice improvement
- Quality improvement
- Service excellence
- Institutional effectiveness
- Continuous service improvement

# Resource 1: Quick-Start Project Template

## Developing a Go-To Plan for Behind-the-Scenes Coordinator Tasks

### Why It's Useful

A quick-start template for running a process improvement project ensures that nothing falls through the cracks. As the number of projects increases and others on campus want to replicate your work, this resource will help your campus maintain a consistent methodology.

### Critical Elements

There's no need to reinvent the wheel every time you kick off a new process improvement project—but local conditions on your campus may apply. As you make plans to run a process improvement project, make sure to include the following elements:

- A realistic project time frame for:
  - Developing a project charter
  - Recruiting team members
  - Conducting advance work (data collection, pre-readings, stakeholder interviews, etc.)
  - Convening team meetings (whether several days in a row or across a few weeks)
  - Implementation
- Expectations for the project sponsor's involvement (e.g., creating the project charter, joining the team kickoff meeting, approving the future state, presenting the implementation plan)
- A pre-event briefing to provide the process improvement team with an overview of objectives, responsibilities, and process improvement methodology
- Appropriate space and necessary materials for team sessions (name tags, post-it notes, markers, food, process documentation, EAB's Process Improvement Primer, etc.)
- Implementation steps (securing technology resources, policy adjustments, staffing changes, executive support, etc.)

### Resource Example

At the **University of Memphis**, the process improvement team developed a quick-start guide to standardize the logistics for each project. The guide outlines from start to finish the responsibilities of the coordinator (referred to as the PI Project Manager in the document), as well as the primary objectives of each team session. Consider using this resource as a starting point for building your own process improvement project template.

#### A Note on Scheduling

Process improvement team sessions—the dedicated time for walking through Steps 2-5 of the Process Improvement Playbook described in Section I of this primer—tend to take one of two forms:

- 3-5 back-to-back daylong sessions (usually for shorter, less complicated processes)
- 1-2 daylong sessions per week across several weeks (usually for more complicated processes requiring data collection and stakeholder interviews and engagement between each session)

While there's no one "right" way to schedule working sessions, assembling all team members in one place for the duration of the process improvement work is absolutely necessary. The project sponsor can help clear roadblocks when needed.

# University of Memphis's Quick-Start Guide



## Administrative Process Improvement Project

### PROJECT GETTING STARTED – QUICK GUIDE

<b>Project Name:</b>
<b>Project Leader:</b>
<b>Project Time Line:</b>
<b>Team Members:</b>
<b>Team LDAP Email group:</b>

**Team Leader Role and Responsibility** – Individual responsible for carrying out a project in accordance with guidelines set by the Project Management Group. Leader is to assist with meeting facilitation, reviewing team documents and project plan. Keep team focus on the project scope and on time. Work with the PIP Project Manager and team members to execution, implement and communicate project outcomes.

**Process Improvement/Project Manager:**

- Assist with identifying and recruiting team members
- Sends email invitations to team members requesting to serve on team
- Prepares methodology training and presents to team
- Identifies resources and facilities activities for flow charting "AS IS" and the "TO BE" processes
- Responsible for planning, scheduling, organization and execution of a project
- Manages project resources to assure maximum efficiency, effectiveness and resource utilization and follows through with delegating responsibilities
- Conducts team meetings and work sessions
- Encourages and motivates team members
- Manages consultants assigned to the project as necessary
- Recognizes change management issues and risks; develops recommendations
- Prepares project status update reports for Project Management Group and for Executive Committee meetings
- Serves on PMG team and facilitates those meeting

Description		Complete
Project Scope defined -	Program Mgmt. Group	
Team members identified – PMG group assists along with Team Lead	Program Mgmt. Group	
Team members – email invitation to serve on the team and have them obtain Manager approval	PI Project Mgr.	
Meeting with Team Lead <ul style="list-style-type: none"> <li>▪ Discuss their role</li> <li>▪ Think about weekly meeting schedule</li> </ul>	PI Project Mgr.	

# University of Memphis's Quick-Start Guide (cont.)



## Administrative Process Improvement Project

### First 4-5 weeks Getting Started Project Schedule:

<p><b>Process Improvement/Project Manager (BPA) Get Ready:</b></p> <ul style="list-style-type: none"> <li>▪ Schedule Kick-off meeting             <ul style="list-style-type: none"> <li>○ Create Kick-off team meeting agenda</li> <li>○ Create Kick-off methodology PowerPoint                 <ul style="list-style-type: none"> <li>▪ add team scope</li> <li>▪ update governance structure slide</li> <li>▪ add University goal associated to projects</li> </ul> </li> </ul> </li> <li>▪ Request LDAP email group for team communications             <ul style="list-style-type: none"> <li>○ Add team members</li> </ul> </li> <li>▪ Create Team webpage</li> <li>▪ Add the team to the project tracking document /PMG/team_members/teammembers</li> <li>▪ Create Team meeting agenda template</li> <li>▪ Create Udrive (file storage) space in g-processimprovement folder &amp; upload documents             <ul style="list-style-type: none"> <li>○ Grant team's LDAP group permission</li> </ul> </li> <li>▪ Project Plan (excel) - Create/update/maintain</li> <li>▪ Send team instructions how to bookmark Udrive folder (document storage)</li> <li>▪ Serve as team co-lead/project manager for the project</li> </ul>	<p>PI Project Mgr.</p>	
<p><b>Week 0</b> – Schedule Team Kick-off Meeting with Core Team &amp; PMG (Project Management Group)</p> <ul style="list-style-type: none"> <li>▪ Process Improvement Methodology Training</li> <li>▪ Determine weekly meeting time - minimum two meetings for 2 to 2 ½ hours</li> </ul>	<p>PI Project Mgr.</p>	
<p><b>Week 1</b> – flowchart 'As Is' (current process) core-team and resources (3 sessions, 3.0 hr. ea.)</p> <ul style="list-style-type: none"> <li>▪ Document 'Actual Performance' NOT 'Expected Performance'</li> <li>▪ Create/Review/Analyze the Visio Chart</li> </ul>	<p>PI Project Mgr.</p>	
<p><b>Week 2</b> – Pains &amp; Issues - identify &amp; document (2 sessions, 3.0 hr. ea.)</p> <ul style="list-style-type: none"> <li>▪ RCA – root cause analysis, define the cause of the pain and issues</li> <li>▪ Final review and approval of 'As Is' Visio chart</li> <li>▪ Analysis of the 'As Is' process - (tab in Visio chart)</li> <li>▪ Metrics – identify measurable outcomes – what is it today and how much do we expect to save? (time, manual steps, paper etc. unnecessary reviews and approvals)</li> </ul>	<p>PI Project Mgr.</p>	
<p><b>Week 3</b> – flowchart 'To Be' (improved process) core-team and resources (est. 3 sessions)</p> <ul style="list-style-type: none"> <li>▪ Create/Review 'To Be' Visio chart</li> <li>▪ Identify <b>Enablers</b> – prerequisites for improvement (this must happen....)</li> </ul>	<p>PI Project Mgr.</p>	
<p><b>Week 4</b> – Review and approve 'To Be' Visio Chart – with core-team (est. 3 session)</p>	<p>PI Project Mgr.</p>	
<ul style="list-style-type: none"> <li>▪ After the 'To Be' mapping is completed:             <ul style="list-style-type: none"> <li>• Update PMG (Project Management Group) the team's proposed improvements</li> </ul> </li> </ul>	<p>PI Project Mgr.</p>	
<ul style="list-style-type: none"> <li>▪ If any IT resources will be needed – create a helpdesk ticket and assign to appropriate IT Director.</li> </ul>	<p>PI Project Mgr.</p>	
<p><b>Week 5-6</b> – Develop design plan with team members</p>	<p>PI Project</p>	

# University of Memphis's Quick-Start Guide (cont.)

		
<h2>Administrative Process Improvement Project</h2>		
<p>(1 session, 3 hr.)</p> <p><b>Week 6</b> – Begin implementation - review of policies, forms, documents, guidelines etc.</p>	Mgr.	
<p><b>Prior to Go Live</b></p> <ul style="list-style-type: none"> <li>• Create Project summary report – have team review             <ul style="list-style-type: none"> <li>• Include Quick Hits</li> <li>• Outcomes, key findings, deliverables</li> <li>• Recommendations</li> <li>• Future Enhancements</li> <li>• Metrics</li> <li>• Include project focus and goals</li> <li>• Team Lead present Outcome document to PMG</li> </ul> </li> </ul>	PI Project Mgr.	
<p><b>Process Improvement/Project Manager (BPA) Responsibilities during project:</b></p> <p><b>During Implementation:</b></p> <ul style="list-style-type: none"> <li>• Identify Quick Hits that can be changed sooner than wait until go-live</li> <li>• Metrics – identify savings &amp; measurable outcomes</li> <li>• Project Plan – maintain updates</li> <li>• Assist with creating documentation/guidelines</li> <li>• Facilitate team meetings</li> <li>• Serve as team co-leader</li> </ul> <p><b>End of Project:</b></p> <ul style="list-style-type: none"> <li>• Schedule Team luncheon</li> <li>• Create Agenda for luncheon meeting</li> <li>• Schedule Postmortem meeting about 6-12 weeks after go live</li> <li>• Schedule Follow-up 6-8 months from go-live, what is going well, what needs to be tweaked</li> </ul>	PI Project Mgr.	
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# Resource 2: Project Charter Template

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## Scoping Your Work to Secure Buy-In and Jump-Start Success

### Why It's Useful

A project charter, ideally created by the process improvement coordinator in conjunction with the executive sponsor of the project before the assembly of the process improvement team, sets clear expectations for the scope of work. The charter empowers the team to make decisions about processes; it can also remove barriers and authorize the use of resources (time, space, and money) in order for the team to achieve its goals.

### Critical Elements

The project charter template for your campus will expand and evolve with the complexity of process improvement projects. Not all information may be known at the beginning of the project and can be filled in as planning and improvement work unfolds. Include the following baseline elements to ensure the greatest opportunities for success:

- Opportunity statement (Why is this project important to our institution? Why are we improving this particular project now?)
- Expected outcomes or goals
- Core team members
- Process owners, front-line users, and customers
- Other stakeholders (Who else will be impacted?)
- Expected metrics to measure success
- Scope limitations (Where does the process begin and end? What aspects of the process are in and/or out of scope?)
- Expected time frame to assemble the team, conduct process improvement work, present final proposal, execute improvements, and carry out follow-up assessments
- Anticipated financial, technological, or staff support needed to implement improvements
- Potential roadblocks or constraints—and plans for overcoming them

### Resource Example

At the **University of Wisconsin-Madison**, the process improvement team realized that the increased volume and complexity of its improvement projects required more involvement of senior leaders and stakeholders. Consider their template for securing executive engagement across the next two pages when designing the process improvement project charter for your campus.

# University of Wisconsin-Madison's Project Charter



## Administrative Process Redesign (APR)

"Working Together for Service Excellence"

### Team Project Charter

<b>Project Name</b>	[Insert the short title/name for the project here.]	
<b>Executive Sponsor(s)</b>	[Insert sponsor names and titles here.]	
<b>Process Owner(s)</b>	[Insert process owner names and accountabilities here.]	
<b>Problem Statement</b>	[Describe what external and internal customers are experiencing that represents a <i>breakthrough</i> if it can be resolved.]	
<b>Baseline (Metric)</b> [Section optional]	[Define what is being measured and establish a baseline.] <ul style="list-style-type: none"> <li>• [Primary metrics should be tied to the problem statement &amp; goal.]</li> <li>• [Primary metrics should have an operational definition.]</li> <li>• [Primary metrics should be measureable, expressed in the form of an equation and simple.]</li> <li>• [Primary metrics should be aligned to business objectives.]</li> <li>• [Primary metrics should be tracked at the proper frequency (e.g. hourly, daily, weekly, monthly).]</li> <li>• [Primary metrics should be expressed graphically over time with a run chart, time series or control chart.]</li> <li>• [Primary metrics should be validated with an MSA.]</li> </ul>	
<b>Business Case</b> [Section optional]	[Describe the rough estimate of the financial impact if the problem is resolved (potential revenue increase, cost reduction, etc.). Include an estimate of the Cost of Imperfection (COI) which shows the financial impact if the process operated at "perfection."]	
<b>Goal(s)</b>	[Insert one or more clear and concise statements of "what" needs to be done.]	
<b>Stretch Goal</b> [Section optional]	[State what the team could achieve (i.e. its purpose) if it is able to identify and eliminate the major root causes of the process problem:] <ol style="list-style-type: none"> <li>1. [The present/current metrics.]</li> <li>2. [The measurable stretch goal metric]</li> <li>3. [When the goal will be achieved]</li> </ol> [Be aggressive in setting the stretch goal. State it as "_____ will improve from ____ today to ____ by _____ (when). State objective by quarter or year as necessary. Ideally, the stretch goal is impossible under the current state.]	
<b>Scope / Boundaries</b>	[State the beginning and end of the process the team is to work on. State any areas outside of scope that the team should not work on.]	
<b>Team Members</b>	<b>Team Role</b>	<b>Home Organization</b>
[Insert names here.]	[Specify Team Leader, Member,	[Insert work unit here.]

# University of Wisconsin-Madison's Project Charter



## Administrative Process Redesign (APR)

*"Working Together for Service Excellence"*

### Team Project Charter

	Project Manager, or Black Belt.]	
<b>Subject Matter Experts</b>	<b>Area of Expertise</b>	<b>Home Organization</b>
[Insert names here.]	[Insert expertise here.]	[Insert work unit here.]
<b>Project Timeline</b>	[Provide the Project Start Date.] [Provide Key Milestones – for example, date for management proposal including specific deliverables that will be completed.] [Provide target completion dates for each of the DMAIC steps - Define, Measure, Analyze, Improve/Implement, and Control.]	
<b>Support Required</b>	[Identify the resources and cooperation the team will need to be successful.]	
<b>Anticipated Budget</b> [Section optional.]	[Insert budget available for project.]	
<b>Constraints</b> [Section optional.]	[Identify any risks and constraints applicable to the project.]	
<b>Date this Document was Last Updated</b>	[Insert the date this document was last updated - mm/dd/yy.]	
<b>Date(s) Approved by Executive Sponsor</b>	[Indicate date (mm/dd/yy) of the charter approval and also the dates of any approved changes to the charter.]	

# Resource 3: Final Report Template

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## Build Momentum by Showing Your Work

### Why It's Useful

A final report, created by the process improvement coordinator and shared with the team, executive sponsor, and stakeholders, encapsulates the major findings across the entire project. It serves as a baseline reference for future improvement efforts and documents the implementation plan, effectively serving as an agreement and authorization for rolling out solutions for a particular project.

### Critical Elements

The final report should build and iterate upon the information presented in the project charter, explaining the scope of the project, how and why it was selected, goals for the project, and the various stakeholders who were involved. The most robust reports will go further, including the following information:

- Current- and future-state maps
- Current- and future-state data
- Major findings and opportunities for improvement (both short- and long-term)
- Implementation plan (articulating staffing, organizational, training, and technology needs)
- Ongoing data collection plan

### Resource Example

At the **University of Wisconsin-Madison**, the process improvement team rounded out its projects with the creation of a final report, the template for which you can see on the next page. The teams were particularly deliberate in their collection of current-state data and developing plans to ensure continuous improvement through the ongoing collection of future-state data.

# University of Wisconsin-Madison's Project Report

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## Background

*In this section, provide a summary of why this process is important and how this project was selected. This section also includes identification of Project Sponsors, Business Owners, and Process Owners and their role in identifying the project and expectations they have established. This section also lists project goals and identifies the team members.*

## Project Methodology

*This section describes how the project team conducted their work and the methods they used. This can include summary descriptions of tools and methods that are included in detailed documents in the Appendices. The description of the project team methods should outline how the team began the project through their identification of conclusions and recommendations to accomplish the project goals.*

## Findings and Conclusions

*This section is a listing of the summary findings of the project and the conclusions that have been reached from the analysis of those findings.*

## Recommendations

*This section provides the final recommendations that are drawn from the findings and conclusions. The recommendations should include the specific steps that need to be taken to implement the recommendations, as well as indicators that would measure the success of the implementation.*

## Accomplishments to Date

*This section can be included to indicate any accomplishments in the specific steps that have been taken to implement the recommendations, as well as indicators of the success of the implementation.*

## Next Steps

*This section outlines the detailed next steps that need to be taken to implement the recommendations, as well as the timeline of the implementation.*

## Appendices

# Resource 4: Additional Process Improvement Reading

## For When You Just Can't Get Enough Process Improvement

### Why It's Useful

As you develop your process improvement skills, it is natural to want to learn more, to refine your skills, and to see how other institutions have expanded their process improvement initiatives. The resources on this page are a good place to begin.

### Selected Books and Articles

*There is no shortage of literature on process improvement. While most of it is written for the private sector, consider this list as a starting point for diving in.*

- William Balzer, *Lean Higher Education: Increasing the Value and Performance of University Processes* (Productivity Press: 2010)
- Joseph Drasin, "[10 Common Process Improvement Mistakes and How to Avoid Them](#)," *Educause Review* (May 2, 2016)
- Joseph Drasin, "[Building an Office of Process Innovation](#)," *Educause Review* (May 22, 2017)
- Michael Hammer and James Champy, *Reengineering the Corporation: A Manifesto for Business Revolution* (HarperBusiness: 2006)
- Daniel Markovitz, *A Factory of One: Applying Lean Principles to Banish Waste and Improve Your Personal Performance* (Productivity Press: 2011)
- James Womack and Daniel Jones, *Lean Thinking: Banish Waste and Create Wealth in Your Corporation* (Productivity Press: 2003)

### Selected University Resources

*The following institutions are among those that have successfully embedded a process improvement mindset throughout their campuses. Perusing their websites can yield additional examples of templates, communication strategies, and other resources.<sup>1</sup> We at EAB are happy to equip you to network with institutions with process improvement offices upon request.*

- California State University, Sacramento—[Strategic Planning and Quality Improvement](#)
- Carleton University—[Quality Initiatives](#)
- Clemson University—[Lean Office](#)
- Emory University—[Business Practice Improvement](#)
- Michigan Technological University—[Continuous Improvement](#)
- University of Alaska Anchorage—[Lean Center of Excellence](#)
- University of California, Davis—[Organizational Excellence](#)
- University of Memphis—[University Process Improvement](#)
- University of South Carolina—[Lean Community of Practice](#)
- University of Virginia—[Organizational Excellence](#)
- University of Wisconsin-Madison—[Administrative Process Redesign](#)
- University of Wisconsin-Madison—[Office of Quality Initiatives](#)

1) Program names and links accurate as of April 2018.



# Process Improvement Compendium

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# How to Use This Compendium

## Case Studies to Boost Buy-In for Process Improvement Initiatives

Campuses new to process improvement may question whether the effort will actually lead to tangible results. Evidence that other campuses have successfully tackled a range of projects—simple or complex, isolated to a single unit, or spanning many departments—can help secure buy-in among skeptics and spark ideas about where and how to make the next fix.

The following pages include short case studies of commonly broken processes across six functional areas. While a process will not be “broken” in the same way on every campus, the examples included in this compendium share common points of breakdown that may ring true to stakeholders on your campus.

**Process Breakdown:** This section lists common reasons for broken processes. Consequently, breakdown points such as “non-value-added steps” and “unnecessary approvals” appear throughout the compendium as a reminder to look out for these failure paths in other processes where improvement efforts are under way.

**The Problem:** While customers might complain about a process in any number of ways, this section describes the root cause of the problem as manifest on a real campus. Knowing the root cause of the problem means that your solution can target that specific issue, yielding the greatest improvements.

### Work Order Resolution

#### Process Breakdown

- Non-value-added steps
- Unnecessary approvals
- Lack of standardization

#### Improvement Metrics

- Customer satisfaction
- Work order resolution time
- Number of open work orders per month

#### Case Studies

- **THE PROBLEM:** Routine work orders required the approval of four senior managers, creating a backlog that frustrated customers waiting for work to be completed. **THE FIX:** Eliminating unnecessary approvals reduced the lead time for routine work orders from 24 to 2 days.
- **THE PROBLEM:** Staff cherry-picked preferred tasks, leading to a backlog of more complicated work—and customer frustration with delays in resolving problems. **THE FIX:** Introducing a first-in, first-out system for work orders, along with eliminating non-value-added steps, reduced the number of open work orders from 3,000 to 300 per month.
- **THE PROBLEM:** Paper-based processes required the central Facilities staff to produce physical work orders and deliver them to team leaders, who then prioritized and distributed the work orders to the Facilities staff. After completing their work, Facilities staff members completed additional paperwork that was duplicated, sent to stakeholders, and filed. **THE FIX:** Automated solutions, including the adoption of a maintenance management program and a mobile app for creating, receiving, and tracking work orders, improved work order turn time, along with overall customer satisfaction.

**Improvement Metrics:** As discussed throughout this primer, tracking pre- and post-improvement metrics is a critical component of “showing your work”—and proving that the improvement initiative has paid off. These improvement metrics correlate to the process breakdown point.

**The Fix:** This is the active ingredient that improved a process at the actual institution experiencing “the problem” in the case study. While most teams will be able to identify many opportunities to improve a process, it is valuable to articulate concisely what you did.

# Process Improvement Compendium

## Facilities

### Work Order Resolution

#### Process Breakdown

- Non-value-added steps
- Unnecessary approvals
- Lack of standardization

#### Improvement Metrics

- Customer satisfaction
- Work order resolution time
- Number of open work orders per month

#### Case Studies

- **THE PROBLEM:** Routine work orders required the approval of four senior managers, creating a backlog that frustrated customers waiting for work to be completed. **THE FIX:** Eliminating unnecessary approvals reduced the lead time for routine work orders from 24 to 2 days.
- **THE PROBLEM:** Staff cherry-picked preferred tasks, leading to a backlog of more complicated work—and customer frustration with delays in resolving problems. **THE FIX:** Introducing a first-in, first-out system for work orders, along with eliminating non-value-added steps, reduced the number of open work orders from 3,000 to 300 per month.
- **THE PROBLEM:** Paper-based processes required the central Facilities staff to produce physical work orders and deliver them to team leaders, who then prioritized and distributed the work orders to maintenance crews. After completing their work, the crews completed additional paperwork that was duplicated by central Facilities staff members, sent to stakeholders, and filed in storage. **THE FIX:** Automated solutions, including the adoption of a maintenance management program and a mobile app for creating, receiving, and tracking work orders, improved work order turn time, along with overall customer satisfaction.

### Work Order Parts Acquisition

#### Process Breakdown

- Non-value-added steps
- Duplicative steps

#### Improvement Metrics

- Overall cost of the process
- Work order resolution time
- Volume of work orders completed

#### Case Studies

- **THE PROBLEM:** Facilities operations accrued significant expenses by generating a high volume of invoices for small-dollar expenses. The average invoice amount was \$39, with some less than a dollar, though the average cost to process each invoice totaled \$90. Each purchase order also prompted the Facilities staff to travel off campus to obtain the needed part, reducing the time they could devote to tasks on campus. **THE FIX:** With the objective of reducing off-campus trips and the number of invoices created, the university negotiated with the largest vendors to accept a monthly p-card payment based on a single invoice, rather than one for each itemized part. An analysis of the parts with the highest turnover led to the creation of in-house stock to prevent unnecessary trips. A new policy was implemented to allow student workers to travel off campus to obtain parts. The number of average monthly invoices decreased from 200 to 6, with an associated reduction in costs from up to \$17,000 per month to around \$300 per month. The average number of completed work orders also increased, from 807 to 876 per month.

# Process Improvement Compendium

## Facilities

### Creation of Physical Keys for Building Access

#### Process Breakdown

- Non-value-added steps
- Unnecessary approvals
- Excessive handoffs

#### Improvement Metrics

- Process lead time

#### Case Studies

- **THE PROBLEM:** A paper-based process for duplicating a key required four approvals, eight handoffs, the creation of a physical work order, the movement of a master key mold across campus, and finally the creation of the key.  
**THE FIX:** An electronic portal eliminated all paper in the process and utilized automated email notifications for the viewing, managing, and granting of authorizations. The new process also eliminated unnecessary approvals.

### Office Furniture Acquisition

#### Process Breakdown

- Backlog of requests

#### Improvement Metrics

- Lead time
- Customer satisfaction

#### Case Studies

- **THE PROBLEM:** Facilities managed the acquisition of office furniture for faculty and staff, but given the low urgency of this task, the paper-based requests for furniture were relegated to the bottom of the queue, creating frustration among customers about what was seen as a simple task. **THE FIX:** Facilities created an Amazon-like online portal pre-populated with vendors and approved furniture options to automate the ordering process.

### Minor Facilities Renovations

#### Process Breakdown

- Insufficient information for customers
- Lack of existing process

#### Improvement Metrics

- Response time
- Lead time
- Customer satisfaction

#### Case Studies

- **THE PROBLEM:** Faculty and staff, unsure of the process by which to request minor facilities renovations, submitted maintenance requests that ultimately went unanswered, as they fell outside of the scope of routine maintenance orders. In many cases, frustrated customers decided to do the work themselves, creating risk management issues. **THE FIX:** Facilities leaders created an online project request form that included a worksheet to help customers estimate costs and the time-to-fix for common requests. The online portal also provided an overview of the entire process. An oversight committee was established to review and respond to renovation requests in a timely manner.

# Process Improvement Compendium

## Information Technology

### Granting Access to IT Systems

#### Process Breakdown

- Poor enterprise content management

#### Improvement Metrics

- Time to obtain access
- Accuracy of information

#### Case Studies

- **THE PROBLEM:** To obtain access to disparate IT systems required for their jobs, university staff members submitted requests for access via a central IT portal. However, that portal lacked an accurate list of IT systems on campus, resulting in custom requests for IT staff members to provide employees access to the needed systems. Initially, the average time to obtain access was measured at 20.6 days. **THE FIX:** A list of all current IT systems on campus was assembled, and a standardized process was introduced for both requesting access to systems and updating information about existing systems. The average time to obtain access decreased to 5 days.

### Revoking Access to IT Systems

#### Process Breakdown

- Lack of a standardized process

#### Improvement Metrics

- Time to revoke access

#### Case Studies

- **THE PROBLEM:** The lack of a standard process for flagging exiting employees resulted in their continued access to campus-wide systems for an average of 205 business days after termination, exposing the university to unnecessary risk. **THE FIX:** In the new process, an employee's removal from the Payroll system triggered an alert to the IT department that the exiting employee should be removed from campus-wide systems. The time to revoke access was lowered to 5.6 days.

### Project Intake

#### Process Breakdown

- Lack of a standardized process

#### Improvement Metrics

- Customer satisfaction
- Volume of completed projects

#### Case Studies

- **THE PROBLEM:** The lack of a standard process to request project support resulted in a deluge of requests to the IT project management office, as well as frustrated customers who did not receive timely support. **THE FIX:** An online form consolidated requests for IT services and articulated a "terms and conditions" agreement for both requestors and IT staff members. Submission of the form prompted the IT team to accept, defer, or deny the request and provide a justification of the decision. The portal also included an online tracking system to allow customers to view the status of their requests.

# Process Improvement Compendium

## Human Resources

### New Employee Hiring

#### Process Breakdown

- Unnecessary approvals
- Backlog of decisions
- Only one step processed at a time
- Excessive loop-backs

#### Improvement Metrics

- Time to hire
- Number of steps
- Number of approvals
- First-pass accuracy

#### Case Studies

- **THE PROBLEM:** Indicative of redundant approvals, senior administrators signed off on potential new hires three separate times before a unit could make a hiring decision. **THE FIX:** Approvals were eliminated for two senior administrators as well as the president, as their frequent travel delayed decision-making. The overall time to hire for administrative positions decreased by 10 weeks. As an added bonus, campus leaders found that eliminating redundant approvals made the remaining sign-offs more rigorous, as those maintaining approval authority felt more accountable for the consequences of their decisions.
- **THE PROBLEM:** Given a policy that required first consideration for open positions be given to former employees, HR postponed external searches for candidates until after priority candidates were identified, screened, and interviewed. Priority candidates were often not qualified and ultimately not selected, delaying the time to hire by at least two weeks. **THE FIX:** HR simultaneously initiated searches for priority candidates and external candidates, ending the external search if a qualified priority candidate was selected, which occurred only 6% of the time.
- **THE PROBLEM:** Staff pre-hiring lead time lasted 17 days and required 11 handoffs, with decisions made in batches. **THE FIX:** Non-value-added approvals were eliminated with a single electronic “entry point” created for all new hires. Clarifying the expectations for the entry-point data resulted in a 75% reduction of lead time and improved the initial complete and accurate rate of submitted data from 8.5% to 80%.
- **THE PROBLEM:** After receiving resumes from candidates, an HR staff member manually entered the data into a spreadsheet for future analysis before passing the information to a recruiter to screen applicants, resulting in backlogs of up to two weeks. **THE FIX:** All resumes were immediately passed to the recruiter, allowing candidate screening to proceed concurrently with data entry.

# Process Improvement Compendium

## Human Resources

### Faculty Contract Processing

#### Process Breakdown

- Paper-based processes
- Rework
- Low-value steps

#### Improvement Metrics

- Time to process an employment offer

#### Case Studies

- **THE PROBLEM:** To help deans determine faculty candidates' salary offers and generate a contract, potential new hires completed a confusing form that often resulted in incorrect information, which necessitated deans or HR staff seeking additional information. During the lag time for generating a contract, candidates frequently accepted other offers. HR staff collectively spent approximately 1,000 hours per year working on faculty contracts, primarily responding to inquiries about delays and processing errors. **THE FIX:** A simplified electronic form was created with pre-populated application data. An online portal facilitated the electronic delivery and tracking of contracts, which were created and approved within weeks, rather than months.

### Base Pay Adjustment

#### Process Breakdown

- Poor enterprise content management
- Lack of standardization

#### Improvement Metrics

- Help desk tickets regarding use of the systems
- Cycle time
- Volume of work
- Rework loops

#### Case Studies

- **THE PROBLEM:** Initiators triggering a base pay adjustment had to simultaneously operate in two IT systems that did not communicate with each other and for which the initiators had not received training. **THE FIX:** Given that one of the two systems was used to process only two of eighteen request types, HR designated one of the rate adjustment systems to serve as a single, user-friendly point of entry with the capability of uploading attachments and submitting adjustment requests in batches. Training was also mandated before granting system access.
- **THE PROBLEM:** Policies and procedures for adjusting base pay were not standardized across units, frustrating central staff members who had to respond to and explain inconsistencies. Differing policies for each employee category type and an onerous title structure further complicated the work of central HR staff. **THE FIX:** All staff were consolidated into one employment category with a single set of policies and procedures for pay adjustment easily accessible through a searchable online repository.

# Process Improvement Compendium

## Human Resources

### Parking Permit Acquisition

#### Process Breakdown

- Unnecessary handoffs
- Order of steps

#### Improvement Metrics

- Number of unit touches

#### Case Studies

- **THE PROBLEM:** During onboarding, HR instructed new employees to contact the parking department to obtain parking permits, though the parking department refused to issue a permit without the employee's ID and email. However, an employee's email address could not be obtained without first signing an IT policy waiver and obtaining the manager's signature. Confusion among the process resulted in HR staff meeting with new hires one-on-one to repeatedly troubleshoot the same problems. **THE FIX:** HR leaders consolidated process steps by unit and reordered each unit's responsibilities to front-load all prerequisite tasks and ensure an optimal flow of process activities. An electronic onboarding system allowed for information needed for subsequent steps to be collected simultaneously and dispersed automatically to relevant units.

### Paid Time Off Reconciliation upon Staff Departure

#### Process Breakdown

- Non-value-added steps

#### Improvement Metrics

- Cost avoidance

#### Case Studies

- **THE PROBLEM:** HR staff manually audited the amount of paid time off reported by departing staff and verified that unused paid time off matched unit records. Each audit required two hours of staff time to complete, but HR staff rarely uncovered discrepancies, and in cases where they did, the typical difference was minimal, around five hours. **THE FIX:** After calculating that the cost to perform the audit outweighed the savings it generated, the university eliminated the reconciliation process altogether, freeing up staff time for more value-add work.

# Process Improvement Compendium

## Finance

### Expense Reimbursement

#### Process Breakdown

- Localized rules
- Only one step processed at a time
- Excessive handoffs

#### Improvement Metrics

- Days to reimburse
- Volume of rework
- Number of handoffs

#### Case Studies

- **THE PROBLEM:** The expense reimbursement approval process relied on a large amount of paper—particularly reimbursement forms and attached receipts—moving from desk to desk along the approval chain. **THE FIX:** Introducing an automated expense management system allowed users to track the status of all approvals and receive email notifications when action was required.
- **THE PROBLEM:** Disconnects between campus policies and the design of the expense reimbursement system required the faculty and staff to enter a large quantity of explanatory information in an open field to account for issues that the system flagged as out-of-policy. **THE FIX:** The expense system was redesigned to include more user-friendly language and clarify confusion between policies and process. Ultimately, an alternative front-end solution to the reimbursement processing system was piloted and rolled out for all of campus. The send-back rate of expense forms decreased from 62% to 12%.
- **THE PROBLEM:** After the university eliminated the requirement of submitting receipts for every miscellaneous expense under \$75, some individuals and units wanted to exert additional control and maintained this rule at the local level, creating a backlog of work in the system as well as frustration among those waiting for reimbursement. **THE FIX:** Upon identifying that a policy misunderstanding was at the root of the problem, unit leaders emphasized that their areas would be adhering to the university policy, not creating their own.

### Vendor Payments

#### Process Breakdown

- Paper-based processes
- Duplicative work

#### Improvement Metrics

- Lead time
- Error rate
- Time to pay

#### Case Studies

- **THE PROBLEM:** For each payment, multiple versions of the same form were filled out, scanned, copied, and entered into different systems. Confusion about the state of payment often led to late fees or duplicate payments. **THE FIX:** Adopting an electronic payment system created a single portal that automatically updated all connected systems, so that information from invoices had to be entered only once. Each invoice could be tracked in a dashboard, eliminating the need for printing and mailing. The new process resulted in 50% less time spent scanning invoices. The disbursement voucher process time improved by 50% and reduced the likelihood of data entry errors. Additionally, the ability to pull cost data from the system for an indirect cost rate for utilities saved two weeks of staff time per year.

# Process Improvement Compendium

## Finance

### Extra Compensation Processing

#### Process Breakdown

- Excessive handoffs
- Redundant approvals

#### Improvement Metrics

- Volume of work
- Lead time

#### Case Studies

- **THE PROBLEM:** Obtaining approval for extra compensation relied on an entirely paper-based process involving seven handoffs and signatures. Separate forms were used for instructional and noninstructional staff, none of which was easily accessible to those initiating the action. **THE FIX:** Finance introduced a single online, electronic workflow that utilized approval queues and electronic signatures. The system was common for all types of staff members and automatically produced policy and other codes unfamiliar (and irrelevant) to the process initiators.

### Corrective Non-Salary Cost Transfers

#### Process Breakdown

- Inconsistent policies
- Redundant approvals

#### Improvement Metrics

- Number of handoffs
- Days to issue a correction

#### Case Studies

- **THE PROBLEM:** Inconsistent policies and redundant checks and reviews resulted in frequent errors and delays in processing corrective non-salary cost transfers within the university financial system. **THE FIX:** Revised policies and procedures reduced the number of approvals and signatures from 5 to 2. The Finance department also introduced new training and monitoring systems. The average number of days needed to issue a correction decreased from 29 to 12.

### Department Cashiering

#### Process Breakdown

- Lack of a standardized process

#### Improvement Metrics

- Accuracy of general ledger

#### Case Studies

- **THE PROBLEM:** No standardized institutional process existed for the receipt, control, and custodianship of cash and related records, resulting in confusion about cash resources and opening the university to risk. **THE FIX:** Finance leaders created a single cash management process, from payment receipt to completed bank deposit, that included controls to secure and accurately account for funds. The process included point of receipt controls, remittance to a central cashiering or lockbox location, establishing electronic payments with automatic deposit as the primary methods of receipt, and reconciliation to the general ledger.

# Process Improvement Compendium

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## Auxiliaries

### Student Mailroom Package Processing

#### Process Breakdown

- Non-value-added steps
- Customer frustration

#### Improvement Metrics

- Number of parcel touches
- Labor costs

#### Case Studies

- **THE PROBLEM:** An increase in package volume from online retailers overwhelmed the mailroom, with packages touched up to eight times across multiple pickup zones. This process resulted in long lines, frustrated students, and significant overtime expenses to keep up with demand. **THE FIX:** Auxiliary leaders redesigned the physical layout of the mailroom and introduced an electronic tracking system that automatically notified students of available packages (rather than through campus mail) and informed staff members of the location of individual packages. The number of touches per parcel dropped to two, staff morale improved, and the need to pay for overtime staffing was eliminated.

### Student Mailroom P.O. Box Rental and Billing

#### Process Breakdown

- Non-value-added steps
- Handoffs

#### Improvement Metrics

- Time to assign a P.O. box

#### Case Studies

- **THE PROBLEM:** Requests to open or close a P.O. box at the student mailroom had to be submitted in person, on paper, and with a physical proof of payment. Mail services staff exported a file of students with P.O. boxes that the bursar's office manually reentered for billing. **THE FIX:** The creation of an electronic portal eliminated the need for mail services staff to validate student IDs, wait for student to complete forms, enter the forms into the central mail system, and issue keys, resulting in a time savings of 62 staff hours per year. An automated billing process eliminated manual tasks for both students and the bursar's office.

# Process Improvement Compendium

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## Auxiliaries

### Bookstore Order Fulfillment

#### Process Breakdown

- Non-value-added steps

#### Improvement Metrics

- Process costs
- Labor costs
- Number of steps

#### Case Studies

- **THE PROBLEM:** The campus bookstore fulfilled online orders on-site, with staff pulling inventory from already-shelved items brought from the warehouse. The complex fulfillment process involved a five-page checklist of steps involving nine employees and multiple touches of each book. **THE FIX:** Online order fulfillment moved to the warehouse, opening up space for additional revenue-driving retail space in the store. The new order fulfillment process required only four employees, with books touched only once. The improved efficiency resulted in a 35% reduction of annual temporary staff costs.

### On-Campus Housing Resident Checkout

#### Process Breakdown

- Non-value-added steps
- Excessive handoffs

#### Improvement Metrics

- Number of handoffs
- Time to checkout

#### Case Studies

- **THE PROBLEM:** A multi-step, paper-based, on-campus housing resident checkout process involved many campus units, and the flow of paperwork between them resulted in delays in preparing rooms for new residents, generating final billing statements, and/or issuing refunds for departing residents. The average number of days to complete the checkout process was 23. **THE FIX:** Non-value-added steps, such as waiting for invoices for lost keys, were eliminated, given their low value to the overall process. An electronic workflow immediately issued electronic refunds or bills. Overall, the average number of days to process resident checkout improved to 6 days at the end of the semester and 7 days during the semester.

# Process Improvement Compendium

## Research Administration

### Award Setup

#### Process Breakdown

- Unnecessary approvals
- Non-value-added steps

#### Improvement Metrics

- Number of days for account setup
- Number of approvals

#### Case Studies

- **THE PROBLEM:** An inefficient workflow involved redundant approvals and document review across four levels of authority, leading to a substantial delay from the time a sponsor issued an award to the time a project was set up in the financial system. Without the means to begin spending funds, research could not begin; alternatively, charges were temporarily assigned to other projects and later reconciled. If the contract and bill plan were not set up in the financial system, accounts receivable could not be created, meaning that invoices were not generated, drawdowns were not performed, and sponsor payments were neither received nor applied. **THE FIX:** Solutions included workflow improvements (e.g., the creation of a dedicated award setup team and the elimination of a redundant review of new awards before account setup began), IT improvements (e.g., the creation of automated reminders of various steps to primary investigators and other stakeholders), and training solutions (e.g., award setup training incorporated into research training seminars). Ultimately, the average award setup time decreased from 113 days to 20 days.

### Award Closeout

#### Process Breakdown

- Lack of standardized process
- Localized rules

#### Improvement Metrics

- Number of days for award closeout
- Number of account overdrafts

#### Case Studies

- **THE PROBLEM:** Frequent account overdrafts and the accumulation of unallowable expenditures that had to be transferred to other sources of funding resulted in substantial delays in submitting final financial reports and closing out awards. Delayed financial reports prevented researchers from accessing the next year's funding from a sponsor. The average award closeout time was initially over six months. **THE FIX:** Solutions included creating temporary accounts for unresolved expenditures; increasing the F&A adjustment limit; creating incentives for primary investigators to clean up overspent awards; standardizing award closeout procedures, including timelines and automatic notifications; publishing quarterly reports about each division's expired awards and negative balances; and creating an electronic workflow to track the status of award closeout, enabling visibility for every level of oversight. At the most recent measuring, the closeout time had decreased to under three months.

# Process Improvement Compendium

## Research Administration

### Collaborative Research Requests

#### Process Breakdown

- Lack of a standardized process
- Non-value-added steps

#### Improvement Metrics

- Number of days to propose, submit, and receive response to collaborative research requests
- Number of approvals

#### Case Studies

- **THE PROBLEM:** The lack of a standardized process confused primary investigators of collaborative projects who had to draw on personnel and resources from multiple departments, leading to delays in submitting applications and securing necessary approvals. Consequently, reviewers and approvers lacked the necessary information about proposals, resulting in rework. Approvers spent valuable time double-checking proposal components that were of low financial risk to the university. **THE FIX:** The university's research and sponsored program database was modified to allow grant preparers to access necessary information from across departments; a single process was also created and disseminated to improve the consistency of collaborative research proposals. After implementation, the average number of days for an approval of collaborative research decreased from 4 to 1.5 days, and the volume of requests increased.

### Creation of Sub-Grant Agreements

#### Process Breakdown

- Lack of a standardized process

#### Improvement Metrics

- Time to create sub-agreements

#### Case Studies

- **THE PROBLEM:** Outgoing sub-agreements took too long to process, resulting in research delays for both the university and partner institutions; initially, a six-step process averaged 378 days, in part because decentralized support staff did not complete this process with enough frequency to ensure proficiency. **THE FIX:** The responsibility for creating sub-agreements moved from individual post-award accountants to a single unit within the central pre-award organization; templates were created to standardize the new process, which consisted of only five steps averaging 30 days.



# Advisors to Our Work

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SECTION

4

# Advisors to Our Work

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The Business Affairs Forum is grateful to the individuals and organizations that shared their insights, analysis, and time with us. We would especially like to recognize the following individuals for being particularly generous with expertise in the area of business process improvement.

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