

April 2015

Contributions in Education and Outreach

No. 3f



Wood-based Entrepreneurs Toolkit: Operational Planning

Scott Leavengood

Forest Research Laboratory
College of Forestry
Oregon State University
Corvallis, Oregon

Oregon State
UNIVERSITY

THE AUTHORS

Scott Leavengood is Associate Professor of Wood Science & Engineering and Director of the Oregon Wood Innovation Center (OWIC), Department of Wood Science and Engineering, College of Forestry, Oregon State University.

ACKNOWLEDGMENTS

The author appreciates the technical review provided by Dan Coyle of Coyle Treepieces and Dirk Wallace of SPEKPLY.

DISCLAIMER

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement or recommendation by Oregon State University. The views and opinions of authors expressed herein do not necessarily reflect those of Oregon State University and shall not be used for advertising or product endorsement.

THE OREGON FOREST RESEARCH LABORATORY

The OSU College of Forestry Oregon Forest Research Laboratory (FRL), established by the Oregon Legislature, is Oregon's principal forest-related research engine. Faculty and students have been providing science-based knowledge, developing new technologies, and creating innovative decision support tools for more than 100 years. The breadth and depth of our faculty expertise enables us to strengthen fundamental understanding of forested ecosystems, help forest-based businesses compete in a global marketplace, support the viability of communities, and inform public policy that balances environmental protection and economic development. Research results are made available through scientific journals, educational programs, and through FRL publications such as this, which are directed as appropriate to forest landowners and managers, manufacturers and users of forest products, leaders of government and industry, the scientific community, the conservation community, and the general public.

OPEN ACCESS

In keeping with a 100+ year history of making research publications available on request, the OSU College of Forestry supports an Open Access policy. This publication and other College of Forestry publications are available through ScholarsArchive@OSU, a project of the OSU Libraries. This publication is available online: <http://hdl.handle.net/1957/55635>.

PRODUCED BY

The Forestry Communications Group
Oregon State University
202 Peavy Hall
Corvallis, Oregon 97331-5704
Phone: (541) 737-4270
Email: ForestryCommunications@oregonstate.edu
Web site: www.forestry.oregonstate.edu/forestry-communications-group

April 2015

Contributions in Education and Outreach

No. 3f

Wood-based Entrepreneurs Toolkit: Operational Planning

Scott Leavengood

Forest Research Laboratory
College of Forestry
Oregon State University
Corvallis, Oregon

Oregon State
UNIVERSITY



*This is a publication of the Oregon Wood Innovation Center (OWIC),
Department of Wood Science and Engineering, College of Forestry,
Oregon State University.*

Abstract

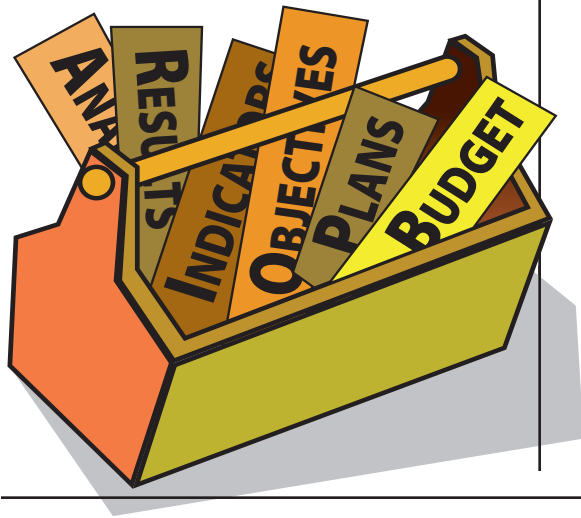
Leavengood, Scott. 2015. *Wood-based Entrepreneurs Toolkit: Operational Planning*. Contributions in Education and Outreach No. 3f, Forest Research Laboratory, Oregon State University, Corvallis.

By nature, most entrepreneurs are “doers” rather than “planners.” At the same time, we know that successful organizations, regardless of their size, must plan for the future. High-level strategic planning such as establishing the long-term direction of the company is critical, but useless without a plan for implementation. This “implementation plan” is also known as an operational plan. Operational planning is an annual process that involves six primary steps: (1) analyzing the operation: defining where we are now and identifying issues that are likely to impact the company; (2) establishing key results areas: broad categories that define how progress will be measured; (3) developing performance indicators: measurable factors within each key results area; (4) establishing objectives: defining where we want to be with specific, measurable results; (5) developing action plans: defining how we will meet our objectives; and (6) developing budgets: allocating the resources required to meet objectives. We walk through each of these steps in this publication.

Keywords: Operations, planning, implementation plan, operational planning

Contents

Introduction	1
1. Operational Analysis	3
1.1 Identify a Broad Range of Issues	3
1.2 Prioritize the issues	4
1.3 Analyze the issues	4
1.4 Summarize the issues	5
2. Key Results Areas	6
3. Performance Indicators	7
4. Operational Objectives	8
5. Action Plans	9
6. Budgets	11
7. Conclusions	12
8. Information	12
9. Appendix	13



Strategic and operational planning may often seem to apply only to large corporations. But all successful organizations—and many successful people—invest time and other resources into planning for the future.

“People don’t plan to fail, they fail to plan.”

— attributed to Benjamin Franklin

Introduction

Strategic planning for a company focuses on big picture questions: What are our long-term goals? Where do we see ourselves in the future? And what direction will get us there? Regardless of whether you use the term, “strategic plan,” chances are you have such a plan for your business, even if it’s only in your head. For example, you may have a one-person portable sawing business that is focused on making fencing and decking from local softwoods. Your long-term goal may be to make your operation stationary (i.e., bring the logs to the mill rather than vice-versa). You may also want to add hardwoods to the mix, eventually add a dry kiln, develop a website—and target local cabinet- and furniture makers. These are all elements of a strategic plan!

But such planning is merely dreaming, unless you also hammer down details such as who will do what by when, where, and why. That is, there must also be a plan for implementation of the strategic plan. And that’s where “operational planning” comes in.

Operational planning is more tactical and action-oriented than strategic planning. Unlike

the longer-term strategic planning, operational planning has a shorter-term focus. If strategic plans present the vision of a business in the distant future, operational plans provide the tactical details of how to work toward making that vision a reality a few months or a year at a time.

Another way to view the two types of plans—strategic and operational—is like deciding on where to go on a family vacation. The strategic plan, the high-level view, might simply set the target of an annual vacation to “somewhere with sunny beaches.” Operational planning would then add the year-to-year detail of which beach (San Diego, Miami, or Tahiti?), how to get there (planes, trains, or automobiles?), when, who will do what, how will progress toward the destination be evaluated, and of course, the budget.

Operational plans ask these types of questions: Where are we now? Where do we want to be? How do we get there? And how do we measure our progress?

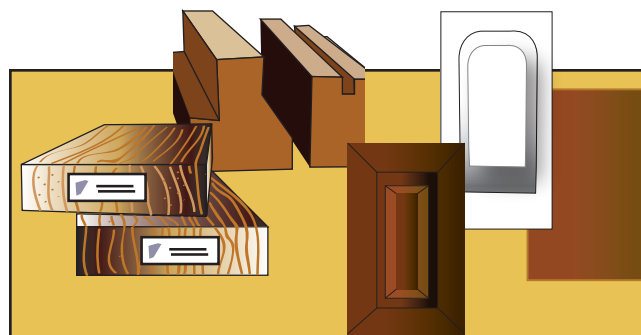
This publication will show you how operational planning helps answer these

questions, based on six steps outlined in *The Executive Guide to Operational Planning* (Morrisey, Below, and Acomb 1988):

1. **Conduct an Analysis of the Operation**—examination of current performance, factors needing short-term attention, review of the prior year's operational plan, and issues likely to impact operations (where are we now?)
2. **Establish Key Results Areas**—broad categories within which results must be achieved in order to meet our goals (part 1 of how do we measure our progress?)
3. **Develop Performance Indicators**—measurable factors within each Key Results Area such as dollars of sales, units of production, etc. (part 2 of how do we measure our progress?)
4. **Establish Operational Objectives**—specific, measurable results from the Key Results Areas and incorporating indicators of performance (where do we want to be?)
5. **Develop Action Plans**—actions required to accomplish each operational objective (part 1 of how do we get there?)
6. **Develop Budgets**—allocating the resources required to meet objectives (part 2 of how do we get there?)

Each successive step builds upon the previous step, as the focus sharpens from broad to narrow. The first three steps serve as background for helping you to work toward determining your objectives. The fourth step—comprising the objectives themselves—is the foundation of operational planning. The last two steps specify how you will achieve your objectives and what it will cost.

In the sections that follow, we first will discuss each step, and then walk through it with our fictitious company, Caveman Lumber, as owner Niko Smith and his team develop an operational plan for the coming fiscal year.



Example: Operational Planning for Caveman Lumber

Caveman Lumber produces a commodity softwood lumber line for a regional market.

Caveman Lumber has developed a strategy to shift from being focused strictly on making fencing and decking from local softwoods to adding hardwoods to the mix as well. Further, their marketing strategy for this new venture is to produce a special product for a few, well-specified local cabinet- and furniture makers, based on core competencies of being a local producer with strong customer relationships. So, for the coming year, how do they begin to implement this strategy?

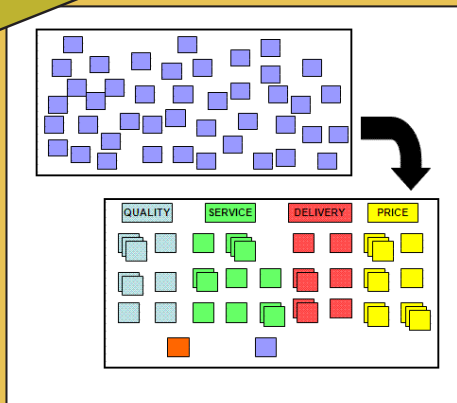
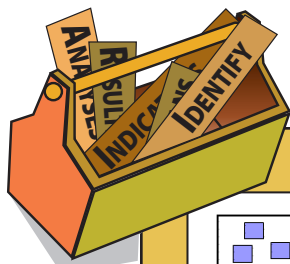
In short, what will be their operational plan for next year?

We will discuss each of the steps in the six sections that follow, using examples from Caveman Lumber.



1 Operational Analysis

This first step of operational planning helps to identify the major issues that will impact the company in the coming year, and is a key step in linking the strategic plan (and long-term issues addressed in that plan) with shorter-term issues to be addressed in the coming year by the operational plan. The main activities in this first step are to develop the base of information to serve in the creation of objectives and action plans. This step progresses from “issues to information to courses of action.” The specifics of this step are detailed below.



1.1 Identify a broad range of issues

Brainstorm a list of issues that might impact the company. Sources for these issues might be the strategic plan, prior operational plan, actual company performance compared to plan, customer feedback, or political changes. Issues may include things related to finances, impacts of shifts in the market, or quality.

If there are several people working on this process, consider using a technique known as an Affinity Diagram: this involves writing all the issues on sticky notes and then posting them on a wall; team members then work to group similar issues together. The main benefits in this context are to help to see the issues at a glance and, more importantly, to foster communication.



Identify

Company founder Niko and co-owners, Terri, and Mike, sit down to brainstorm. They review last year's accomplishments, explore the general environment of their business, and discuss customer feedback. Here are the issues they identify:

- Several customers have complained about late and incomplete shipments, as well as inconsistency of board dimensions because of boards that are too thick or too thin.
- Two new custom sawmills have started operating in the region in the past year.
- A local furniture maker has expanded operations and added five new employees.

Caveman Lumber has had challenges related to both log supply and workforce: specifically, they have struggled to get seasonal workers when needed and those workers they do get are generally unskilled and often unreliable.

1.2 Prioritize the issues

Have all key personnel rank the issue categories on a scale of 1 to 5, with a score of 5 being given to issues likely to have the most significant impact on the organization as a whole, and 1 having the least impact (Table 1). Sum these rankings to distill the list down to the top three to six that are most important for the organization. Begin to identify the potential impact of the issues on the organization.



Prioritize

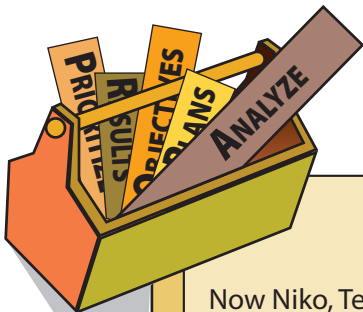
Given that Caveman Lumber is a small company with limited personnel and resources, the team members know they can't tackle all these issues in the coming year. So Niko, Terri, and Mike rank those likely to have the most significant impact (Table 1). The top four are new mills, expansion of the local furniture firm, log supply, and quality.

Table 1. Operational Analysis – Prioritization of Issues

Issue	Rank (1 to 5)			Total
	Mike	Terri	Niko	
Late shipments	2	3	2	7
Incomplete shipments	3	2	4	9
Quality (board dimensions)	4	3	4	11
New mills in area	5	5	4	14
Expansion of local furniture firm	4	4	5	13
Log supply	4	4	4	12
Workforce (quantity)	1	3	2	6
Workforce (quality)	4	3	2	9

1.3 Analyze the issues

Research the top issues to identify key sources of information (e.g., trade associations, government agencies, universities); review and analyze the information to determine the cause, scope and potential impact of each issue.



Analyze

Now Niko, Terri, and Mike begin to hammer out what the impacts of these issues might be. For example, the new mills could out-compete them or they could possibly be partners to help in the short-term with drying services—assuming that these mills have dry kilns. The expansion of the local furniture firm appears to be a very positive sign, but they need details on what materials and species this company uses, as well as their purchasing practices and specifications. Now the team discusses what additional information they need, potential sources, and who will acquire this information.*

* See online publication CEO3e, *Wood-based Entrepreneurs Toolkit: Finding Market Information*. <http://owic.oregonstate.edu/sites/default/files/static-files/CEO3e.pdf>



1.4 Summarize the issues

You should summarize the issues and draw conclusions (supported by information from the analysis in 1.3) and alternative courses of action. As part of this step you should then determine what changes are needed in order to address the key issues.



2 Key Results Areas

The next step in operational planning is to identify key results areas (KRAs), that is, broad categories within which results must be achieved in order for the business to meet its goals in the coming year. Before discussing KRAs, we first need to acknowledge that the sequence of steps here may be a bit different than the way you are accustomed to doing things.

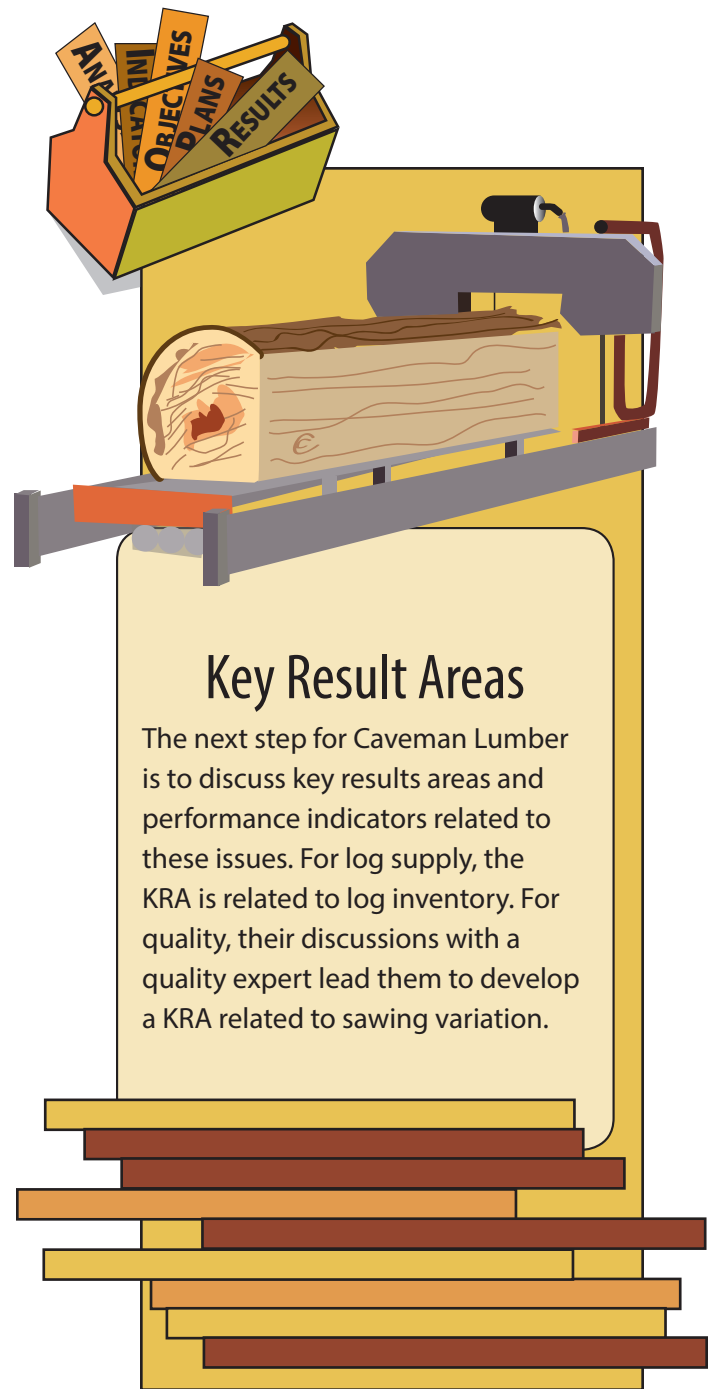
The typical approach is to analyze the issues (as discussed in the previous section), set objectives, and identify the indicators for these objectives, i.e., specifically what will be measured to track performance relative to the objectives.

The approach presented here is slightly different. We still begin with analysis, but the next steps are identifying KRAs, then the performance indicators (discussed below), and only then are we ready to develop objectives. The advantage of this revised approach is that it allows for a more thorough consideration of alternative objectives.

All too often leaders jump immediately to the most obvious and frequently used objectives (e.g., we only need one objective—make more money!) and as a result, miss the opportunities to effectively link the company's long-term strategy to its shorter-term objectives. And as mentioned in the introduction, the objectives are really the foundation for the operational plan – so it's critical that we establish the right objectives.

Good KRAs are

- Focused—on where performance is truly critical and are few in number (4 to 6)
- Broad—include financial and non-financial areas
- Strategic—support the strategic plan
- Succinct—short-and-sweet. Don't worry at this point about making them measurable (that comes next)



Examples of KRAs include revenue/sales, quality assurance, and productivity. You may be thinking that these examples are too broad to be useful. But again, the point here is simply to determine the key area. For example, if a company's strategy is to be the quality leader in an industry, quality assurance should very likely appear as a KRA. The next step is to drill down and get more specific with indicators of performance within each KRA.

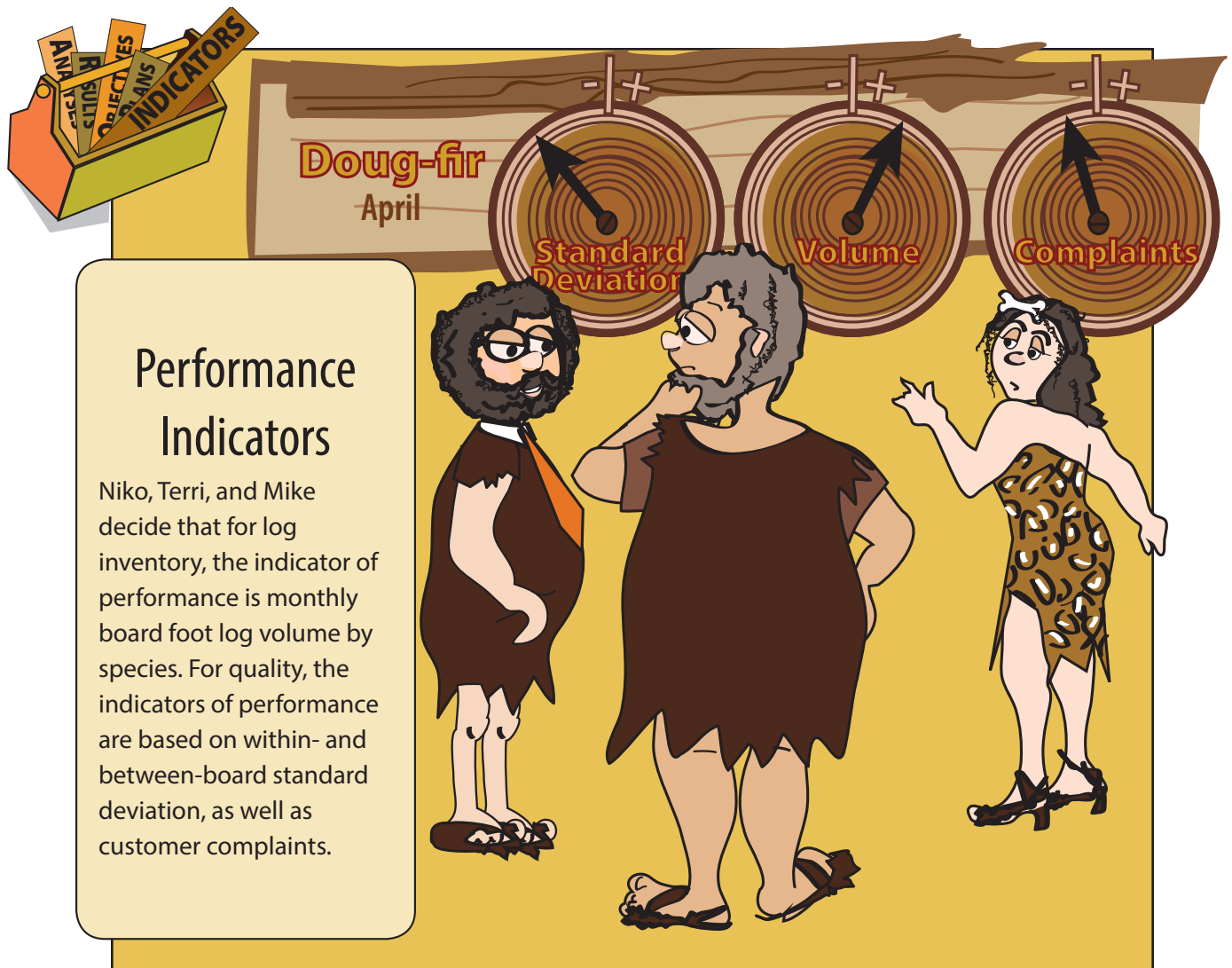
3 Performance Indicators

Recall again that the steps listed here in operational planning build on one another and move from the broad to the narrow. In that regard, now that we have examined and analyzed critical issues that may impact the company and determined several Key Results Areas, we are ready to build upon that work by adding a bit more detail about what to measure regarding the KRAs.

At least one performance indicator is needed within each KRA. These indicators must be measurable, should specify what to measure as

opposed to how or when, and are measures that can be tracked on an ongoing basis (as opposed to a milestone that might be more of a yes/no accomplishment). For example, with respect to quality assurance (the KRA), performance indicators might be customer claims, yield (recovery), and cost of rework.

With our KRAs now established and performance indicators within each KRA, we are now ready to establish specific objectives for our operational plan.



4 Operational Objectives

“Tell me how you will measure me and I will tell you how I will behave.”

—Eliyahu Goldratt, Author of *The Goal* and founder of the Theory of Constraints.

This is the most important step in the operational planning process. The quote from Eli Goldratt above really gets at the heart of the issue—objectives drive behavior, and thus by extension, at least in theory, the right objectives drive the right behavior.

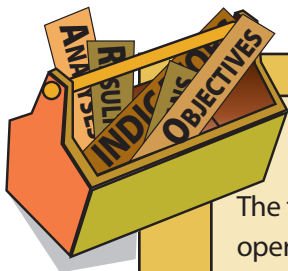
For example, if “increasing sales” is your objective, without any further stipulations you may go to great lengths (and expense) to wine-and-dine customers, cut prices, or take other measures to meet the simple objective of increasing sales. But, if one of your primary objectives is also to increase profit, the “increase sales” objective could actually end up being counter-productive.

Good, clear, measurable objectives, and those that are aligned with company strategy, are essential to company success. An operational objective is a statement of measurable results to be accomplished. *In other words, it’s your target!*

As with the KRAs, you will generally need a set of four to six operational objectives. Any more than that may make it harder to keep your focus and align your efforts toward one set of goals.

There should be at least one objective for each KRA. Organizations typically use brainstorming to develop an initial list. Then they whittle the list down to a critical few. It’s helpful to keep the strategic plan in mind as you whittle down the list. Here are some guidelines for establishing objectives:

- Begin each objective with “To,” followed by an action word that suggests accomplishment vs. simply activity. Good examples are “complete,” “acquire,” or “produce,” as opposed to words like “develop” or “conduct” that are more activity-oriented.



Operational Objectives

The team at Caveman is now ready to establish operational objectives. Niko, Terri, and Mike recall that good objectives are critical because they are intended to drive behavior. They develop these two objectives:

1. To complete a study of the purchasing needs (volumes by species and grade, as well as specifications such as moisture content and size) of the furniture and cabinet firms in their region by March 15th.
2. To reduce within- and between-board sawing variation from current values of 0.060” and 0.085” to 0.040” and 0.050” by June 1st.

Note: the data in the second objective are from recommendations made by the quality consultant.



- There should be a single measurable result that is specific and quantitative.
- Include a target date for completion.
- Be realistic, but at the same time ensure the objectives require a ‘stretch’ and as such are a significant accomplishment.
- Focus on the “what and when” rather than the “how and why.”

Here’s an example of a *weak* objective: “To decrease customer claims.”

While this is nice and succinct, it doesn’t provide enough detail to tell us specifically what to measure and, hence, it will be impossible to know for sure if we’ve been successful.

Here’s the same objective, modified to make it stronger: “To decrease the cost of customer claims from \$x to \$y by July 1.”

With our objectives established, we now know what we aim to do and by when. The next step is to develop the step-by-step plan, and that’s precisely the purpose of action plans.

5 Action Plans

This is the step where the rubber really meets the road. The purpose for action plans is to answer these questions:

- Who will do what (specific steps) by when?
- What resources do they need?
- How will we monitor progress for each specific step?

And, in fact, these questions serve to inform development of a template or form that can be used to summarize an action plan (Table 2).

Table 2. Template for Developing Action Plans

Steps	Who is accountable	Target Start / End Dates	Resources needed

In the “Steps” column, you can list the five to ten major steps involved to accomplish each objective. The other columns are pretty self-explanatory.

Some background in project management is very helpful for developing action plans. There are textbooks, courses, and software (e.g., templates for Excel) available on project management. Another tool is known as a Gantt chart (Appendix, Figure 1). This chart would replace the template shown in Table 2 and would serve as a visual tool for displaying the key steps in a process, which activities can be conducted at the same time (i.e., in parallel) and which activities must wait until other activities are complete or resources (e.g., people) are available. The appendix provides discussion on Gantt charts.

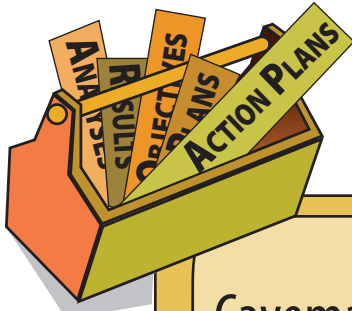
Regardless of the approach you use to develop and display the action plans, be sure to review the prior work that has been done, the operational analysis in particular. The operational analysis is intended to serve as key information for risk assessment and consideration of “what if” scenarios in developing the action plan. For example, what are the risks to the plan if significant changes occur in the political environment or with technology or the economy?



Action plans are also intended as reality checks on the scope and timing of the objectives. For example, does the plan indicate that an objective can be accomplished in the specified time period—are there sufficient resources

(time, people, and money) available when they are needed? And might there be conflicts for resources with action plans for other objectives?

A team approach is best for developing action plans. Anyone who might be involved in meeting an objective should be included. When you develop the plan, consider step-by-step specifically what needs to be done, by when and by whom, and what resources are needed to meet the objective. And it's to that latter point—resources—that we now turn.



Caveman Lumber Action Plan for Objective 2 — Quality

Steps	Who is accountable	Target Start/End Dates	Resources needed
Work with consultant to get baseline data on quality and plan for improvement	Niko	Completed*	[\$1000]
Acquire precision measuring tools and software	Mike	Jan 1/Jan 15	\$300
Attend QC training at local community college	Niko	Feb 10/Feb 12	\$750
Develop spreadsheet for inputting and analyzing quality data	Terri	Feb 12/Mar 15	16 hrs
Discuss current quality with customers (obtain customer feedback and suggestions)	Mike	Feb – Mar	4 hrs
Develop sampling methodology	Niko	Mar 15/Mar 30	8 hrs
Conduct follow-up visit with quality consultant	Niko	Apr 1	\$1000
Address consultant recommendations, e.g., maintenance and equipment upgrades?	Niko	May 1/May 31	\$2500
Evaluate data and compare to targets (as stated in objective); adjust as needed	Niko	June 1	
		Total	\$4550

**As part of operational analysis*

6 Budgets

The budget is the final step in the operational planning process. And if all the other steps have been properly addressed, developing an operational budget should flow quite smoothly. In fact, if you review the steps discussed above, you'll see that consideration of needed and available resources occurs all along the way.

The operational planning process should begin with a thorough operational analysis that includes a review of the prior years' budget performance. And if this information, along with key results areas and performance indicators, leads to the establishment of the "right" objectives, as well as a detailed action plan for meeting those objectives, then development of a budget should flow quite naturally, as the majority of the required information has already been obtained.

A budget is intended to optimize the use of limited financial resources, provide ongoing visibility of financial performance to the plan, focus on priority areas with the greatest financial significance to the organization, and serve as an additional forum for communication, participation, and involvement. It's not our intent here to present a "how to" manual on developing budgets. There are many good resources available for that.

Rather, we are focused on budgeting—the "ongoing process of determining, allocating, and controlling financial resources required to attain organizational objectives" (Morrissey et al. 1988). Budgeting is intended to be an ongoing process as opposed to a once-a-year activity. As the plan is implemented, there must be constant checks and balances to compare performance relative to budget and adjustments made to either the objectives or the budget, or both. And the budgeting process is intended to be integrated and iterative with the operational planning process. That is, they are not intended to be stand-alone activities—the two activities should work together.

Further, the budgeting process should be iterative—there are always trade-offs involved in managing a business. As the objectives and action plans are developed and the budget implications

realized, there is often a back-and-forth process where the budget and/or the objectives and action plans are adjusted to accommodate the reality of finite resources and multiple, sometimes competing, objectives.

For example, if we go back to our analogy in the introduction about a family vacation—the plan may call for a vacation in Tahiti. The budget, on the other hand, may call for a vacation in San Diego (or perhaps at the community swimming pool).



Standard financial ratios are often helpful in budgeting. These ratios are often some of the performance indicators discussed above and may include things like return on sales and dollars of sales per employee. Historical values for these ratios from past performance, or, for an entrepreneur launching a new venture, perhaps from consulting firms based on benchmarking studies, can be helpful.

Last but not least, with respect to the trade-offs alluded to above, budgeting requires consideration of both long-term goals from the strategic plan, as well as the shorter-term objectives of the operational plan. There are times when you must decide to adjust the budget in such a way that sacrifices (or postpones) a shorter-term objective in order to ensure funds are available to meet a longer-term objective. This is often the case with things like buying new equipment, developing new prototype products, or training new employees.

7 Conclusions

This publication is meant to provide a few examples of what might be accomplished in each of the steps in the planning process. Operational planning is an iterative process and adjustments must be made frequently as progress towards the objectives is evaluated. Efforts must also be devoted to measuring progress towards meeting the objectives.



8 More Information

Morrissey, G.L., P.L. Below, and B.L. Acomb. 1988. *The Executive Guide to Operational Planning*. Jossey-Bass Publishers, San Francisco. 130 p.

For direct assistance managing your business, you may contact the following:

SCORE

According to their website: “SCORE is a nonprofit association dedicated to helping small businesses get off the ground, grow and achieve their goals through education and mentorship. We have been doing this for nearly fifty years. Because our work is supported by the U.S. Small Business Administration (SBA), and thanks to our network of 11,000+ volunteers, we are able to deliver our services at no charge or at very low cost.” <http://www.score.org/>

Small Business Development Centers (SBDCs)

SBDCs “provide assistance to small businesses and aspiring entrepreneurs throughout the United States and its territories. SBDCs help entrepreneurs realize the dream of business ownership and help existing businesses remain competitive in a complex, ever-changing global marketplace. SBDC advisors provide aspiring and current small business owners a variety of free business consulting and low-cost training services including: business plan development, manufacturing assistance, financial packaging and lending assistance, exporting and importing support, disaster recovery assistance, procurement and contracting aid, market research help, 8(a) program support, and healthcare guidance.” <http://www.asbdc-us.org/>

9 Appendix

Gantt Charts list the key people involved, as well as start and stop dates. For example, Figure 1 shows the key activities in developing a Log Buyers Database in a list on the left (project proposal, project selection, literature research, etc.). On the right are dates aligned with the tasks on the left.

The literature research activity will be conducted by Bland, Christensen, and Leavengood from October 6th through the 27th. In parallel with this activity (but starting a bit later, October 13th), the same people plus Keil and Nguyen will be working on the work breakdown structure (or WBS a project management tool). Looking further down the chart, Bland and Leavengood are responsible for writing the survey; however, we can see that the task bar for administering the survey doesn't start until after the survey is written. This

is a visual representation acknowledging that one must first create a survey before it can be sent out!

Obviously such a detailed project plan is more appropriate for larger-scale projects where there are numerous steps, interdependencies, and several team members. However, the use of such an approach makes it easier to determine the total amount of time required, time for each task, who is responsible and when—all key bits of information for successful completion of any project. In particular, the total time required is often key, in that there is often a deadline for project completion. When mapping out the steps makes it apparent that the project will miss the deadline, the duration of various steps can be expedited (e.g., we must develop the survey in 2 days not 1 week) in an effort to meet the deadline.

Figure 1. Sample Gantt chart.

