
Developing More Strategic Business Planning Skills: *A DIY Project*

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Credit: 10 PDH

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A Note from the Author:

Welcome to one of our two courses for developing strategic business planning skills. We offer two courses because there is so much material, not because you must take the first before you move on to the more advanced second. These are presented in a manner that you can easily apply in any organization of any size whether public, private, or non-profit.

As a course, it will take you into, over, and through a lot of what may be new information if you are an engineering or project management professional who has not had a lot of contact with the business side of your profession. This is a wide range of topics arranged together into a journey designed to help you see the organizational world around you from a high perspective - a seat at the lofty "Table" that everyone talks about.

We will help you understand how a "Strategic Planner" must look at events, situations, and participants around them so they can create, present, and follow a map that can take the organization from today into tomorrow. And not just follow the map alone like an explorer in the wilderness. Instead, you must take the rest of the organization on the journey, too. Sometimes taking them there involves acting as an internal consultant to other leaders and helping them prepare their employees for the journey to come.

I invite you to begin your journey from this hypothetical situation. I think it will help you understand the presentation of this material. It will help it flow more easily and be more engaging and useful for you.

Here we go:

Assume you are a very competent engineering or project management professional who has developed an excellent record in your technical field working for a mid-sized, family-owned company. You have been there for 10 years doing an excellent job dealing with



the daily tasks associated with your profession.

The company has been described as "solid, steady, but in no danger of setting the world on fire in its market". Just 10 days ago, the founder of the company, who has been President and CEO for the past forty years, finally succumbed to a lingering illness and passed away. His daughter, his only child and heir, was promoted from VP of Business Development into the top spot.

She went to a prestigious business school and has really brought the BD Department to life in the past eighteen months and it is clear she is a "hard charger with fire in her belly" to quote an observer.

Apparently she knows who actually gets things done in the operations area and calls you to her office late one afternoon. She thanks you for your years of dedication and hard work and asks if you are willing to create and fill a position in a different side of the company business - STRATEGIC PLANNER.

Although you really didn't know much about the concept, she briefly explained that you would be her in house "Strategic Planner" regarding organizational development issues associated with "shaking this company out of its rut and dragging it kicking and screaming into the 21st Century."

You accepted the assignment, new designation, and pay increase. So today, Friday, you leave the office as an engineer or project management professional and Monday morning you will come back in as the designated Strategic Planner. Suddenly, you have this frightening thought as it all begins to sink in....WHAT THE HECK DOES A STRATEGIC PLANNER DO?

We hope this course/manual is a valuable, educational, and practical experience for you. We wish you the best of luck on your journey. Please contact me through the website if I can help you solve some strategic thinking problems or you just want a sounding board to bounce some ideas off of.

Good luck...



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Course Overview

"Engineer/PMP to Strategic Planner" - WHAT'S THE DIFFERENCE? Is this just some way to rename the same old job to make it sound more important?

No, it is something very much different. Strategic business management planning encompasses issues that fall OUTSIDE of the traditional engineering or project management function and directly relate to the business of the organization such as:

- Business-related topics such as finance, marketing, employee relations, and information technology
- Topics related to the general business environment:
 - Industry practices and developments, technological developments, economic environment, and labor pool/demographic trends
 - Organization strategic planning, organizational budgeting, corporate social responsibility, corporate governance/ethics and due diligence for mergers and acquisitions
- Aligning human capital activities with the business plan such as:
 - Developing metrics to measure Human Resource's contributions
 - Integrating technology into Human Resource applications
 - Leadership development systems tied to organizational goals

The short explanation is a strategic planner plans for tomorrow while everyone else is dealing with today.

This course includes many Human Resource issues because of one very important fact that many strategic planning initiatives overlook: **acquisition, maintenance, and development of a productive workforce is the greatest expense of any business.** If you want to become an effective strategic planner for your organization, it is critical that you have a thorough understanding of the vital role played by your Human Resources group.

Also, as a Strategic Planner, you may be asked to act as an internal consultant to many departments that historically focus on the day-to-day business and never participate in long-range planning. You may have to teach them how to look beyond today and it will be useful for you to have this course as a resource.

This do-it-yourself (DIY) manual will help a self-directed professional who wants to evolve from the day-to-day issues to eventually becoming a contributing participant at "The Table" helping the executive team's plan for the future become a reality.

Your journey to the Table using this manual will follow this path:

- Looking inward (covered in our course titled Developing Strategic Business Planning Skills: A DIY Project) and helping you prepare for the long journey ahead
- Looking outward – this course - at the organization and viewing its long range plans through the lens of the short range reality you will be facing from your current perspective

We introduce you to some critical topics that you will encounter along the way. We will lead you far enough into them so you will be able to understand and discuss their basic concepts with the wide range of professionals, consultants, and vendors you will encounter in your new role.

Topics such as:

- Useful Metrics
 - HR metrics
 - Performance measurements & feedback
 - Statistical forecasting - break even analysis
- Strategic Business Statistics & Forecasting Methods
- Performance Management Issues
- Performance Problem Analysis
- Workforce Development Fundamentals
- Workforce Capability & Productivity Issues
- Production Concepts (not only for a factory, but can be a document assembly process)
 - Production work cycle, line efficiencies
 - Continuous improvement
 - Supply chain management
 - Capacity planning
- Vendor Relations
- Marketing Issues
- Projects
 - Group dynamic dangers: The Abilene Paradox

- Project performance issues
- Preparing and Presenting a Financial Proposal

There may be pieces of these topics with which you are already familiar or we may touch on issues that you think you'll never encounter where you currently work. Please have patience and study anyway because in this world of mergers, acquisitions, downsizing, rightsizing, or outright bankruptcy...you may not always work there and may need to know it in some unanticipated venue.

Also, we are mixing strategic concepts like aligning performance with long-terms goals with general pointers on actually developing the performance metrics you can use.

In your role as a Strategic Planner, you will become a teacher, coach, counselor, temporary project manager, role model, and sometimes feel like you're the only person who grasps the enormity of facilitating the organizational changes necessary to achieve the executive's announced goals.

Don't let that bother you. We have provided many samples of forms, dialogues, discussion hints, and explanations of topics that you can use as you work with the key players you must rally to your mission of change. They are proven effective in the past and will work for you if you let them. Please feel free to print this course, take it with you, mark it up as needed and let it be a reference as you chart your journey forward.

Learning Outcomes

As a participant in this course, you will be able to:

1. Identify the positions and interests of each side in a vendor negotiation
2. Recommend a strategic solution for a vendor/client negotiation impasse
3. Explain why a "win-win" outcome is not the best way to look at a desired negotiation outcome
4. List three things vendors want from their clients for a successful relationship
5. Identify the warning signs of a "Trip to Abilene" that can damage a strategic planning session
6. Devise plans for strengthening vendor relationships
7. Explain the differences between various simple statistical collection methods and apply them appropriately in forecasting strategic planning outcomes
8. Design an effective proposal for senior management when seeking support for major initiatives
9. Avoid two potential traps within budget proposal recommendations
10. Select appropriate phrasing of desired outcomes to increase the likelihood of executive approval
11. Analyze typical project work processes for opportunities of process improvement
12. Express planning expectations in terms guaranteed to result in productive outcomes
13. Analyze floor plans for optimal work flow
14. Identify issues commonly overlooked when developing a long-range equipment proposal
15. Analyze work flows to determine their current efficiency
16. Explain and apply the principles of 'line balancing'
17. Determine work process flow adequacy
18. Revise workflows to improve efficiency
19. Explain and apply the concept of 'flow time'
20. Create optimal production cycle timing
21. Apply three capacity planning strategies effectively
22. Describe the general flow of a supply chain and list the typical components within it
23. Apply the principals of a supply chain to the organization's long-range goals
24. Explain how the supply chains of manufacturers and service providers differ and are alike
25. Define correctly and use appropriately the various terms associated with supply chain management
26. Identify typical uncertainties in a supply chain and suggest ways to protect against them

27. Take specific steps to apply your high-level view of the organization help to make the product or service available
28. Identify and avoid typical problems that arise within client/vendor relationships
29. Compare and contrast the four different approaches to marketing strategies
30. Compare and contrast three different capacity management strategies
31. Identify eleven different reasons projects do not perform optimally and how a strategic planner can influence positive outcomes.
32. List at least five problems executives could create with project problems without a strategic viewpoint
33. List five steps to avoid when developing a strategic budget proposal
34. List three essentials for a successful budget proposal
35. Compare and contrast government vs. business related budget proposals

Strategic HR Statistics

In our other course, "Developing Strategic Business Planning Skills: A DIY Project", we talked about designing the workforce performance process to align with your strategic planning and said:

1. you must define your long-range business goals...
 - a. then identify the kind of work activities that will get us there...
 - i. then decide what the key job skills are within those work activities...
 1. next identify performance measurements within those job skills to monitor how well the work is progressing...
 - a. and then report the data to someone who makes decisions.

As the Strategic Planner, your stock two-part answer now to the question of, "Should we measure this?" will be, (first part) "Does it give us direct information about whether we're making progress toward our business goals that we can use for decision making?" The second part of the answer will be either "Yes" or "No" depending on how they answer your first question. It goes like this: "No, it doesn't give us any directly useful information", then (you)"No, don't measure that!"

Pretty simple, isn't it? The better you understand the concepts we are bringing to you here, the simpler all of this gets!

We will give you some common HR metrics that are used in different places for different reasons and let you decide which works best in your situation. Remember two key criteria here:

1. Only measure what we NEED, not what's easy. This is a variation on saying just because we can measure it doesn't mean we should. (99% of the time the data we need supports decision making. The remaining 1% of data collection is for government data which doesn't necessarily support business decisions.)
2. Only collect data that helps make decisions toward business goals.

- ▶ Human Capital Return On Investment [we will refer to it as "HC ROI"]
- ▶ Revenue per Employee [RPE]
- ▶ Workforce Development Ratio [WD ratio]
- ▶ Profit per Employee [PPE]
- ▶ Labor Cost as a Percentage of Revenue
- ▶ Voluntary Separation Rate [VSR]
- ▶ Operating Efficiency Rating

Please remember that trends in scores tell you much more than just a single measurement. These metrics are useful only to determine trends of things getting better, worse, or not changing at all. We will help you use these trends for strategic forecasting a few pages ahead on page 24.

Human Capital ROI [HC ROI]

The rationale for this is to illustrate the relationship between human capital investment, productivity, and profitability. HC ROI is the pre-tax profit an organization generates for each dollar invested in regular employee pay and benefits after non-human expenses are removed. Also note the organization must separate compensation and benefit expenses from normal operating expenses for this calculation to work.



$$\text{HC ROI} = \frac{(\text{Revenue} - \text{operating expenses} - (\text{compensation} + \text{benefits costs}))}{(\text{Compensation} + \text{benefits costs})}$$

Sample

Revenue = \$23,432,819 Operating expenses = \$13,587,952
 Compensation = \$2,975,218 Benefit costs = 32% of compensation costs

$$\text{HC ROI} = (\$23,432,819 - \$13,587,952 - (\$2,975,218 \times 1.32))$$

$$\text{HC ROI} = \frac{(\$23,432,819 - \$13,587,952 - (\$3,927,288))}{\$3,927,288}$$

$$\text{HC ROI} = \frac{\$5,917,579}{\$3,927,288} = 1.506$$

You may ask: "So what does the 1.506 mean?"

The answer is, "Nothing by itself. It's just a data point for reference. We will need many more to create a trend so we can tell if it is changing in a way that helps the business or harms the business."

Revenue per Employee [RPE]



This metric allows a company to determine its revenue per employee (full time equivalent abbreviated as FTE). This is widely considered a basic measure of a company's productivity.

When combined with the Workforce Development Ratio (page 16), it allows a company to determine the impact of Workforce Development initiatives on the bottom line.

For example, if your company's RPE increased by 8.3% while the WD ratio has increased only 2.25%, it would indicate that you are getting a good return on your WD efforts.

Sample: $RPE = \text{Revenue}/\text{FTE}$ There are 147 FTE employees and revenue is \$23,432,819

$RPE = \$23,432,819 \text{ (revenue)} / 147 \text{ (FTE employees)} = \$159,407 \text{ per employee}$

Executive question to the Strategic Planner: What is the easiest way to increase the RPE ratio?

Strategic Planner answers: If there are fewer employees across which to spread the revenue, the RPE will increase. (Note: Although it may be the best business answer, it may not be the best "human" answer. This takes a lot of careful consideration.)

A warning here is that the RPE can be manipulated to produce favorable outcomes by reducing the number of FTE. Although managing the size of the work force is a business obligation, a Strategic Planner will caution the executives about cutting "too close to the workforce bone" because there is a critical mass of employees that must be present to sustain the revenues.

As you become more skilled at measuring work efficiency and the productivity of employees using the measurement examples we have present in this manual, it will become easier for you to define that necessary critical mass of employees.

Workforce Development Ratio [WDR]

This identifies the ratio of the entire budget that is invested in workforce development. It is more important that the factors a company uses to determine the WD factors be consistent than “philosophically pure”.



For example, whether a day spent in training class should be broken out as a WD expense or remain as a wage expense is less important than we consistently calculate it the same way every time!

$$\text{WDR} = \text{WD Expenses} / \text{Total Expenses}$$

Sample: Operating expense budget for this year = \$13,587,952

Compensation + benefits costs = \$3,927,288

Workforce Development budget = \$478,500

WDR = \$478,500 / (\$13,587,952 + \$3,927,288)

WDR = \$478,500 / \$17,515,240

WDR = 2.73

I caution against the use of this unless you have a strong training program that:

- allows you to document how the training supports the business goals
- has a secure learning assessment (test) at the end of each training segment (Note: Outsource Training Online can provide this for you at our testing site) with results documented
- implements a method of reinforcing the training back on the job

If you cannot show evidence of a consistent and competent training design, you will have handed the executives a big budget cutting target. They may see this money spent as a wasted expense, not an investment in their workforce.

Profit per Employee [PPE]

This takes the pretax profit an organization generates and attributes this to each FTE. This metric provides an integrated picture of productivity and expense control efforts. Like the previous metric, combining this with the WDR is another way of determining if WD efforts are having the desired results.

Sample: $PPE = \text{Pre-tax Revenue} / \text{FTE}$

Pre-tax revenue = \$23,432,819

FTE = 147 employees

Operating expense for this year = \$13,587,952 Compensation + benefits costs = \$3,927,288

Profit = Pre-tax revenue - operating expenses - (compensation + benefits costs)

Profit = \$23,432,819 - \$13,587,952 - \$3,927,288

Profit = \$5,917,579

Profit per Employee (FTE) = $\$5,917,579 / 147 = \$40,256$

Executive question to the Strategic Planner: "If our WDR has increased from 2.73 to 3.41 while our PPE has increased by 9.74%, is that good news, bad news, or no big deal?"

Strategic Planner answer #1: A WDR increase from 2.73 to 3.41 is an increase of 26.3% $[(3.41 - 2.73) / 2.73]$. If the PPE grew by 9.74%, I would want to know how much the PPE could have grown if the WDR number wasn't so high since I do not have much faith in our workforce development (training) capabilities. Since I have little faith in them, that's **BAD NEWS!**

Strategic Planner answer #2 Since I think we are on the right track in developing our training capabilities, I think that by sharpening our workforce development skills, we can get that number lower which should lift our PPE slightly. Since I like the way the training is evolving for the better, it's **GOOD NEWS** for now and I think it will get better quickly.

This should also help you see how valuable a strong workforce development resource can be. (Please consider our [e-learning courses](#) as part of your workforce development plans!)

Labor Cost as a Percentage of Revenue

This looks at the percentage of revenue dedicated to compensation and benefits costs for regular employees. It provides insight into an organization's benefits and compensation programs. Over time, this measurement can show if the organization is obtaining a higher or lower return on dollars invested in the workforce. Combining this with the WDR, the RPE, and PPE is another way to determine if WD activities are positively affecting your organization.

Sample:

Given these conditions:

- Our WDR has increased from 2.73 to 3.41
- Our PPE has increased by 9.74%
- RPE has increased 12.76%
- Labor costs [\\$3,927,288](#)

Executive question to the Strategic Planner: If our labor cost as a % of revenue has remained relatively steady, so is that great news, good news, or no big deal?

Strategic Planner answer: If labor costs are staying steady with revenue - the percentage of revenue, we are not making much business progress. The best situation is when we develop our workforce and work processes to maximum efficiency and productivity so revenues will grow at a FASTER RATE than labor costs. That way, the % of labor costs is declining. (Note: We will talk later in this course about work flow efficiencies.)

Sample

Labor Cost as a % of Revenue = $\frac{\text{Compensation} + \text{Benefits Costs}}{\text{Revenue}}$

Labor Cost as a % of Revenue = $\$3,927,288 / \$23,432,819 = 16.7\%$

Voluntary Separation Rate [VSR]

This looks at the percentage of FTE that has voluntarily left the organization. High turnover may impact the organization's stability, profitability, and productivity. Be careful not to include those who voluntarily left for non-workplace reasons such as relocation of a spouse or personal reasons unrelated to the workplace.

$$\text{VSR} = \text{Total Voluntary Separations} / \text{FTE}$$

There are additional HR metrics on the web at [Mr. Dashboard](#) and 20 Common HR metrics and their formulas [here](#). (Disclaimer: We provide these only as a reference. We are not affiliated with them, have no idea of their credibility, and you use their material at your own discretion.)

Strategic Business Statistics

Although there is probably a statistic for any aspect of business you can think of, there are a few fundamental ones that can be used nearly anywhere and would be very useful for a Strategic Planner to understand. Once again, we aren't expecting that you will become a statistician but it is wise to be conversant in these various methods to guide others in developing their part of the future organizational goals.

The Break Even Analysis

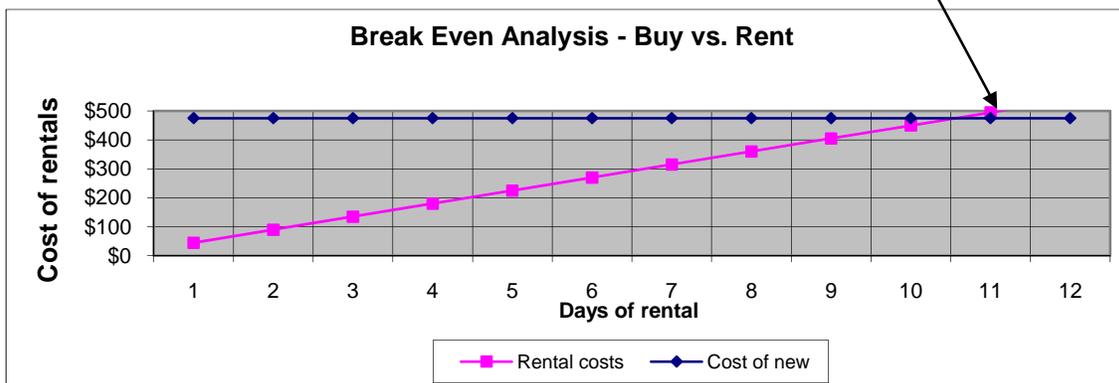
A "break even" analysis is probably nothing new to you. If you ever got tired of getting your old car repaired and decided to buy a new one, you made a "break even" analysis although it may not have been totally based on economics.

Or you may have thought, "instead of renting this _____ (insert anything "rentable" here), I'll probably save money if I just buy one!" There is a mathematical way to determine when it is smarter to pick one alternative over another. That is what we will learn next.

A department is going to start making a product that requires monthly steam cleaning of the production floor. They can either rent a steam cleaner for \$45/day or buy a new one for \$475. They estimate they will not need it more than a day at a time when they rent it. However, you realize at some point it will be smarter to buy the machine than to keep renting it.



QUESTION: From a long term strategic perspective, when does it become smarter to buy instead of rent? If you are going to keep it for more than 11 cleanings, it is smarter to buy.



Break Even Practice Exercise



You want to help the production department plan their staffing needs for the new goals the company has announced. As the designated Strategic Planner, you get with the manager of the production department and work with him to develop the required production schedule below.

You are trying to determine the most cost effective mix of permanent and part-time employees for the various production levels that will be required to meet the future goals and our commitments to this new client. Also, as a Strategic Planner, it would be useful to show the production manager how to do a staffing break-even analysis as he prepares budget requests for next year. That will help him know when to bring in temps, plan for overtime, or hire full-time employees.

The permanent employees can produce 150 items per hour. Part-time employees are also available but they typically produce 70% of what you can get from the permanents. You know the permanent employees cost \$165 day and you must pay them for full-day periods only. Part-timers cost \$16 per hour but must work in whole-hour increments. Help the department manager fill in the rest of the data.

Required Production Amounts	FT hourly production = 150		PT production @ 70% = 105		
	FT/Hrs Needed	Cost to produce this amount	70% PT/Hrs	PT Full Hours	Cost to produce this amount
400					
600					
800					
1000					
1200					
1400					
1600					
1800					
2000					
2200					
2400					

This is what our data looks like.

Required Production Amounts	FT hourly production = 150		PT production @ 70% = 105		
	FT/Hrs Needed	Wage cost to produce this amount	70% PT/Hrs	PT Full Hours	Wage cost to produce this amount
					\$16.00
400	$(400/150) = 2.7$	\$165	$(400/105) = 3.8$	4	\$64.00
600	4.0	\$165	5.7	6	\$96.00
800	5.3	\$165	7.6	8	\$128.00
1000	6.7	\$165	9.5	10	\$160.00
1200	8.0	\$165	11.4	12	\$192.00
1400	9.3	\$330	13.3	14	\$224.00
1600	10.7	\$330	15.2	16	\$256.00
1800	12.0	\$330	17.1	18	\$288.00
2000	13.3	\$330	19.0	19	\$304.00
2200	14.7	\$330	21.0	21	\$336.00
2400	16.0	\$330	22.9	23	\$368.00

This table to the right summarizes the full-time and part-time analysis. The graph on the next page comes from this table.

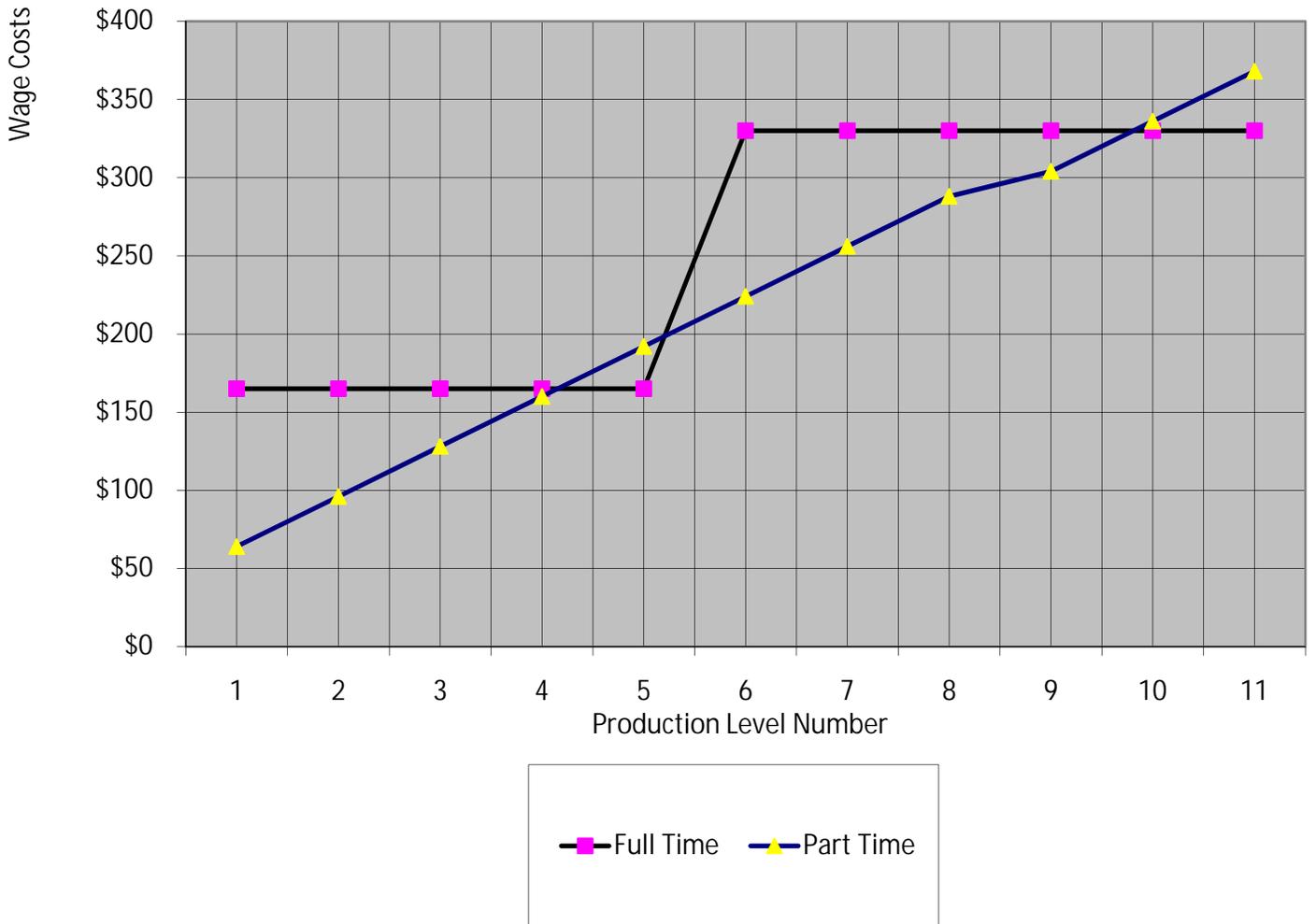
You can see that part-time is less expensive up to production level #4. (\$165 vs. \$160) Then PT is more expensive until production level 6.

It remains less expensive until production level 10 (\$330 vs. \$336)

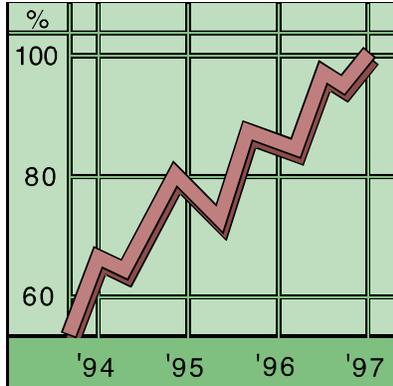
Production Levels	Level Number	FT Wages	PT Wages
400	1	\$165	\$64.00
600	2	\$165	\$96.00
800	3	\$165	\$128.00
1000	4	\$165	\$160.00
1200	5	\$165	\$192.00
1400	6	\$330	\$224.00
1600	7	\$330	\$256.00
1800	8	\$330	\$288.00
2000	9	\$330	\$304.00
2200	10	\$330	\$336.00
2400	11	\$330	\$368.00

FT vs PT Production Break Even Analysis

You can see that part-time is less expensive up to production level #4. (\$165 vs. \$160)
Level 5 = FT (\$165) vs. PT (\$192)
Then PT is more expensive until production level 6 when FT becomes more costly.
(PT = \$224 vs.



Strategic Forecasting Methods



A critical part of strategic thinking is an ability to forecast the future based on past trends. Remember, forecasting is simply an analysis of past trends with the probability of them happening again. It is not a guarantee of outcomes.

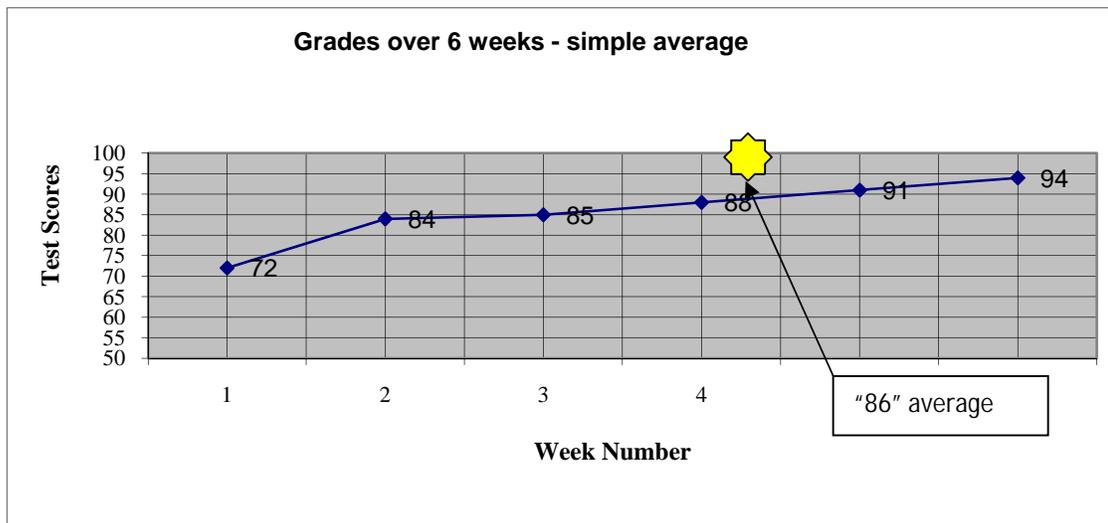
We will look at some simple but powerful methods of making future estimates based on past data analysis: we call this data forecasting.

Effective measurable forecasts are based on the wise selection of the best methods of analyzing past data while non-measurable predictions are usually “best guess” thoughts based on experience and educated opinion. We will look at four strategic prediction methods and you will quickly understand when to use each.

Simple Average (“SA”)



This is what we used in grade school to determine how we would do on the next report card. Although the report card was in our future, it only told us about our past. For example, if we received these scores on our weekly tests, 72, 84, 85, 88, 91, and 94 over the past six weeks, we would add them up (514), divide by 6 (the number of scores), and expect an average grade of 86 (85.66) on our report card.

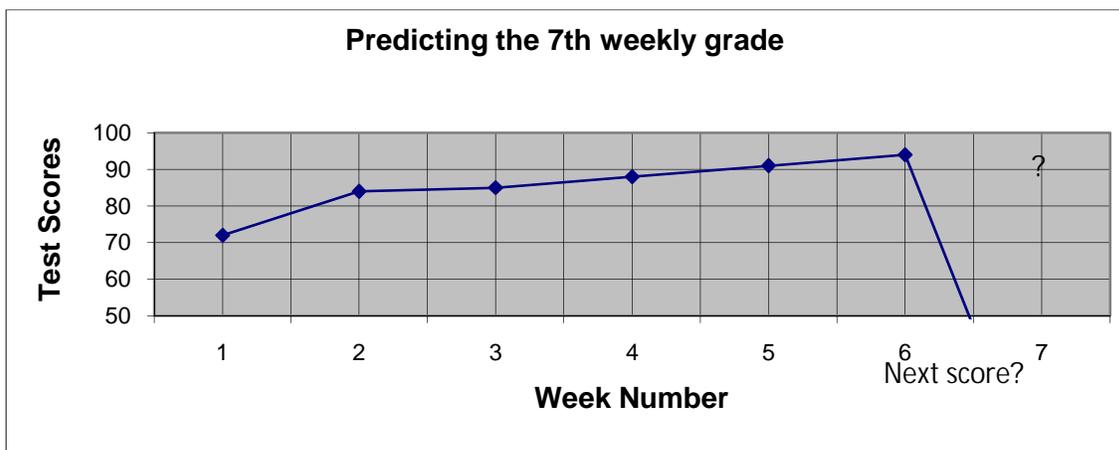


Look at our scores. Do you see the trend of them improving over the past six weeks? Let us assume this trend continues into the 7th week.

What score do you expect to see on the seventh weekly test? Better or worse than the average of "86"? Why?

How does it compare to the simple average?

Do you think the simple average will be a good predictor of what to expect next week? Why?



Simple Moving Average ("SMA")

If our test score has gotten better each week that goes by, then what score can we forecast for the next test?

Instead of averaging the entire period to include the "ancient history" of six weeks ago, maybe we should consider the more recent scores because they seem to have more in common with where we are today instead of how we were six weeks ago. (Apparently our improving study habits are paying off!

NOTE: In a serious tone, if you see a production improving, it is just as important to investigate what has led to the change for the better as it would be to analyze it if it became worse.)

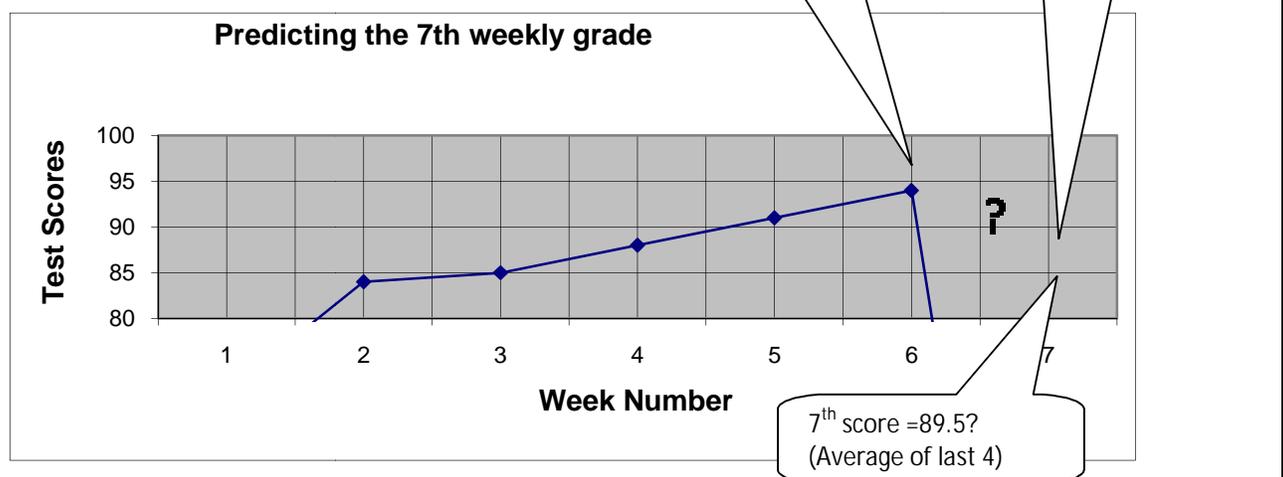
If we just count the last 2 scores, we may not have enough for a fair sampling of test scores. Averaging three will be better. If we average the last four, are we going too far back?

There is no way to be certain whether three or four are better. We will try them both.

Our last four scores from the most recent have been 94, 91, 88, and 85. The average of the last 3 is 91.0. The average of the last 4 is 89.5.

Since our last score was 94 and the trend shows that we are improving steadily, has the moving average score helped our prediction for next week's score?

Why?

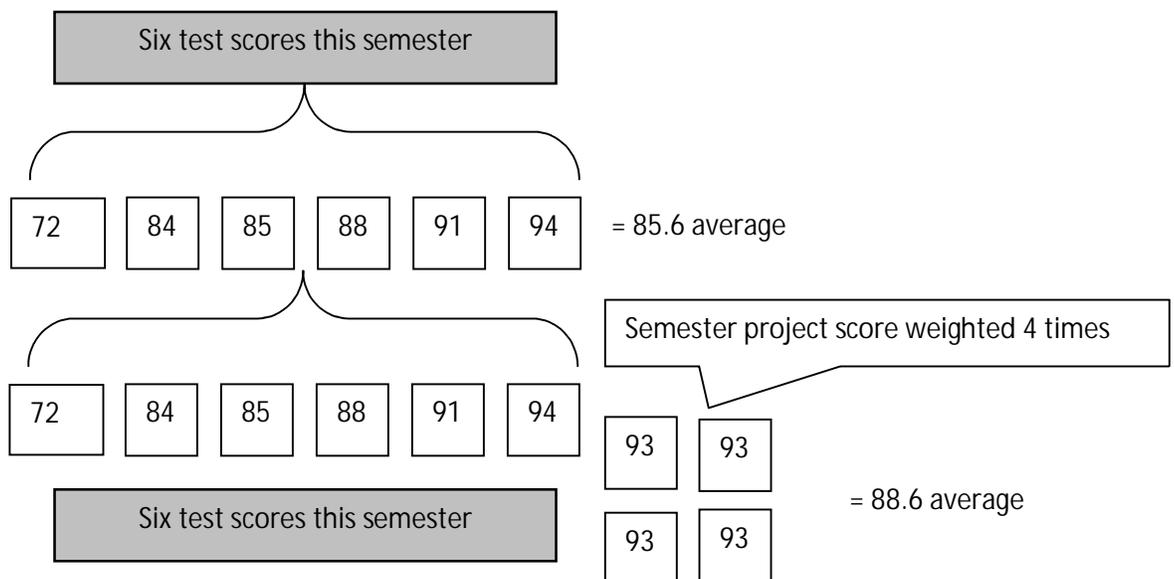


Weighted Moving Average (“WMA”)

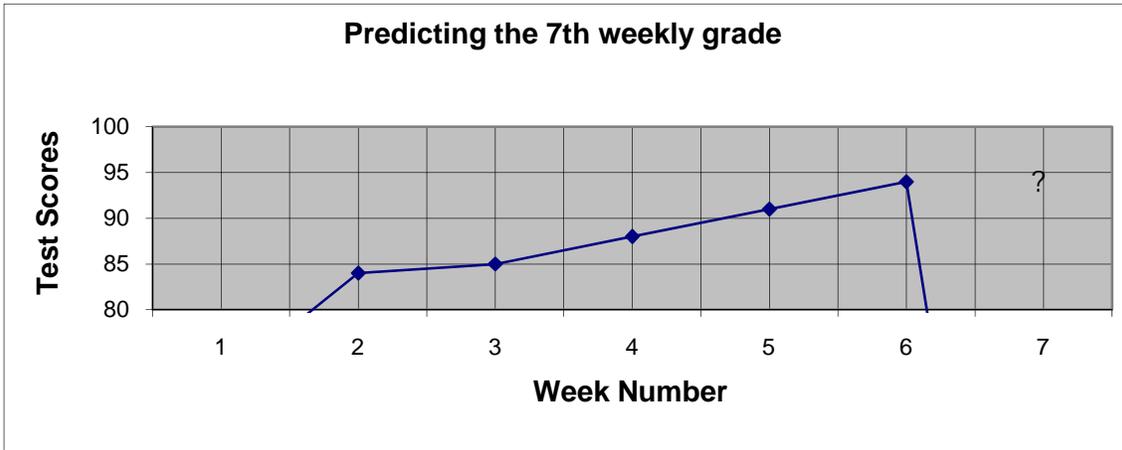
We will leave the prediction about the 7th test grade alone for a few minutes and recall another aspect of grade school, the dreaded “SEMESTER PROJECT”. The teacher would always say something like, “The semester project is very important and your score will be weighted 4 times as much (or some amount that she decided) in relation to your test grades”.

This means that if you received a 93 on the semester project, she would count it as four 93’s when she figured your semester grade. Suppose your test grades were the six we used back on the “simple average” topic on page 24 and we had an average of 86. Now she adds 93, 93, 93, and 93 to that (the actual score of 93 you received repeated four times to give it a weight of 4 times) which brings your semester score total to 886. (72, 84, 85, 88, 91 and 94+93+93+93+93 = 886)

When you divide the semester total score of 886 by 10 scores (the six test scores plus the project score repeated four times), your semester average will be 88.6. Compare this to your semester average of six tests alone that was 85.6



You can see how the WEIGHTED score pulled the average higher from 85.6 to 88.6. We will use this same “weighted” concept that pulled our semester average higher in predicting what our next test score will be. Soon, we will apply this same model to collecting data for budget preparation.



We see that our weekly test scores have been improving steadily. So, if we want to add a weighted number into our calculation for the future, we would be smart to use the latest number (“94”). We can add it into our calculation as many times as we want. There is no “best number” of times you should add a number for proper weighting.

Look at this model to see what we mean.

You can see that the more times we include another “94” to add weight to the calculation, the average increases slightly. You will have to decide through experience how many times you want to add a “weight” to your calculations. Our weighted prediction for our next test score ranges from 85.67 – 93.55. **That is how you would arrive at a strategic business forecast (“prediction”)!**

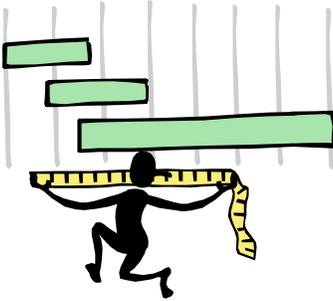
Average	Extra	1	2	3	4	5	6	7	8	9	10	11	12
	94's	72	84	85	88	91	94	94	94	94	94	94	94
85.67	0	72	84	85	88	91	94						
93.55	104	72	84	85	88	91	94	94	94	94	94	94	94
92.33	24	72	84	85	88	91	94	94	94	94	94	94	94
89.83	6	72	84	85	88	91	94	94	94	94	94	94	94

The shaded scores are the first six tests.

This is how the prediction for the next test score changed as we added different weights of 94's to the calculation.

We added this amount of extra 94's (in red bold) to our calculations.

Change Measurement Average (CMA)



Another method we can consider for use in predicting what our next grade will be is Change Measurement Average.

This is used if we are confident that a trend that we have seen in the recent past will continue into the next month.

Let's look back at our grades to see how this works.

Test #	1	2	3	4	5	6
Scores =	72	84	85	88	91	94
Change from prior test		+12	+1	+3	+3	+3
Average change = 4.4	←					

We added the 5 change amounts and found their average to be 4.4 ($22/5=4.4$).

We had 6 test scores but only divided by 5. Why? (We divided by 5 because there were 5 changes between the 6 scores.)

If our grades have changed an average of 4.4 points better on each test, we can add that average change to our last test score and predict the next test score. We add 4.4 to the last score of 94 and get a prediction of 98.4. (We round that down to 98. In reality, that 98 is nearing a perfect score of 100 and it may not be realistic to expect 98. We will just have to wait and see.)

STOP AND REVIEW BEFORE GOING AHEAD



Take a few minutes to consider the value of each forecasting method in your strategic planning. Consider when it is best used and when it is not useful.

Forecasting Method	Useful for this..	Not useful for this..
Simple Average		
Simple Moving Average		
Weighted Moving Average		
Change Measurement Average		

Review

This is a review of the forecasting methods. Plot the data on the graph.

Exercise A. Follow the directions for creating the graph, computing the forecasts, and answering the questions for the situation below.

The Accounts Payable Department has been processing payment accounts for 12 months. You are asked to do some strategic forecasting for staffing and equipment purchase for the next budget cycle using their historical data.

There is a grid on the next page. Use it for this exercise.

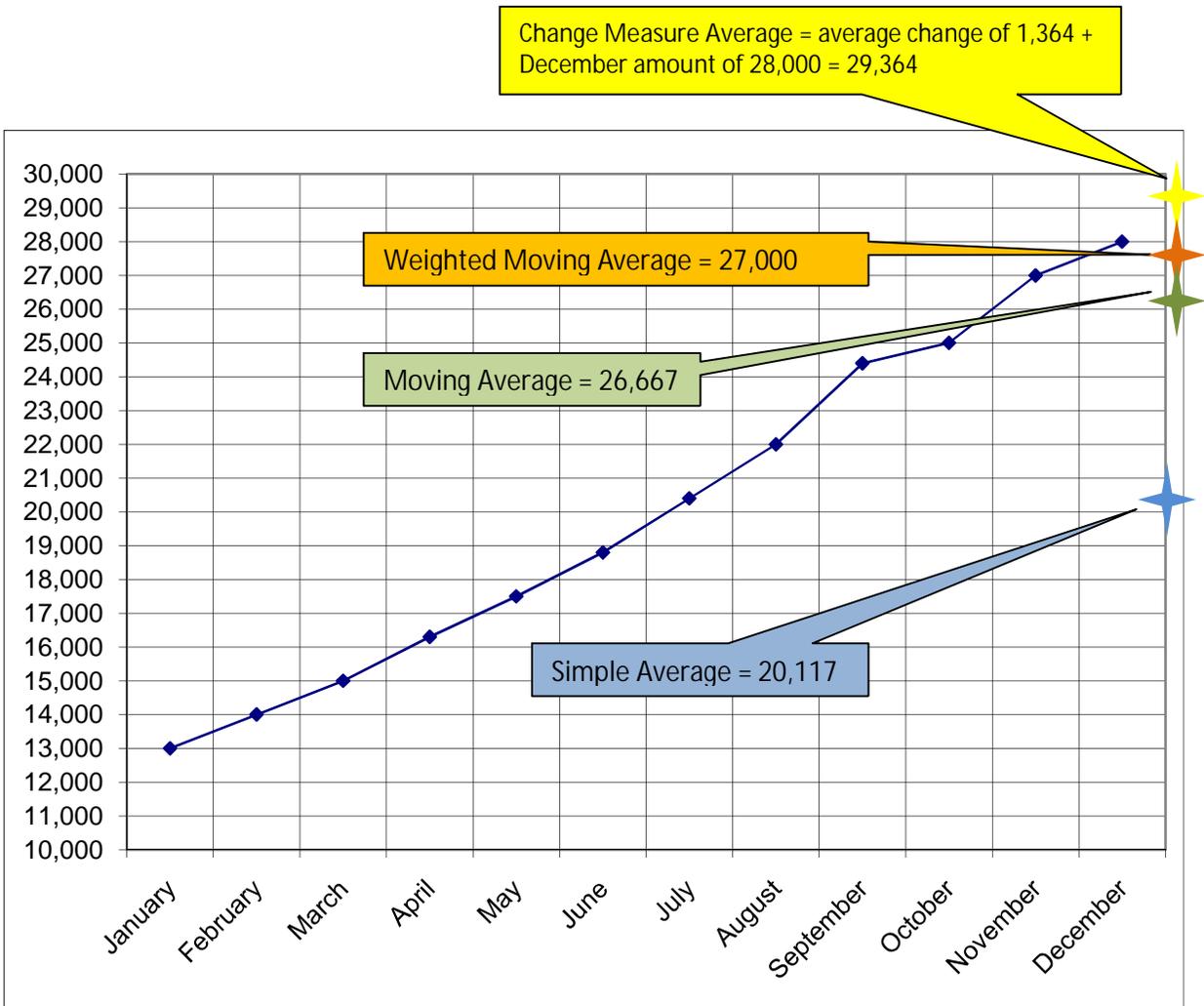
Enter the data from this table into the grid.

Forecast the predicted volume for January of the New Year using:

- Simple Average (SA) of the previous 12 months
- Moving Average (MA) (use the last three months)
- Weighted Moving Average (WMA) for the last three months (use 5x for the most recent month, 4 x for the next most recent and 2 x for the most distant of the last three months.)
- Change Measurement Average (CMA) using all 12 previous months

Number of New Accounts Processed	
January	13,000
February	14,000
March	15,000
April	16,300
May	17,500
June	18,800
July	20,400
August	22,000
September	24,400
October	25,000
November	27,000
December	28,000

Put the four answers on the vertical line for January of the New Year.



Look at the results plotted along the "January of New Year" vertical line. Do you see why the "Change Measurement Average" is the best predictor for January based on the steady growth we have seen during the past year?

Which of these measurements would do the most for your credibility of you were submitting forecasting data for next year's budget based on last year's data? [The "Change Measurement Average" because that is closest to a line extended along the past year data line into January of the New Year.]

Exercise B.

Using the data table below, what would you forecast for February 2012 using:

Simple Average = _____

Moving Average (most recent 3 periods) = _____

Weighted Moving Average (using 4x, 3x, and 2x for the most recent 3 periods) = _____

Change Measure Average = _____

Before you start, what data will you examine?

Look at the data table first vertically within each of the four years. You see that every year starts low in January and grows steadily until a peak in December. Then it starts low again in January of the next year.

Next, look at the data horizontally for the same month across years. The data growth across the table for the same month of

	2011	2010	2009	2008
January	13,000	12,500	12,250	11,750
February	14,000	13,375	13,500	12,990
March	15,000	14,680	14,500	14,000
April	16,300	16,250	16,000	15,950
May	17,500	17,425	17,250	17,000
June	18,800	18,475	18,395	18,300
July	20,400	19,950	19,750	19,500
August	22,000	21,780	20,244	20,100
September	24,400	24,344	24,200	24,100
October	25,000	24,350	24,300	24,200
November	27,000	26,850	26,700	26,000
December	28,000	27,900	27,400	27,000

each new year grows slightly while the data vertically within a year grows rapidly.

What data will you select to predict the February 2012 amount: going across all four previous Februarys or the entire 48 months of the previous four years?

[The four Februarys across the table have more in common for predicting the fifth February in 2012 than by going through all 48 months.]

Predicting Seasonal Trends



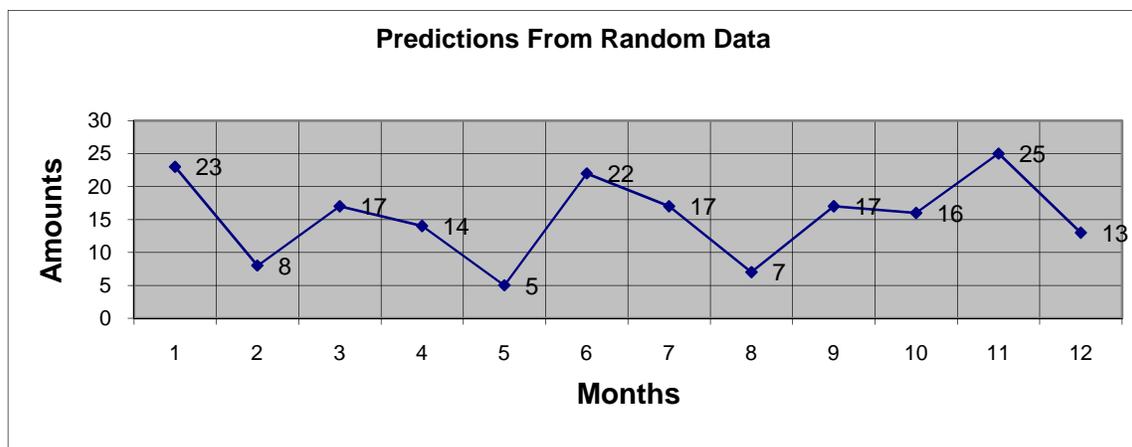
We look at predicting seasonal trends in a similar way that we look at predicting our next grade on a test. We will use the holiday shopping season as an example. Instead of looking at the previous months of this year to predict what kind of a holiday season we can expect, we will look at the previous holiday seasons over the past few years to make a prediction.

There are conditions outside of our control, of course, such as the economy in general, the weather, and possible shortages of a particular item that we must always consider in addition to the pure math data of past seasons. The point we want to make here is that we compare similar data when making a prediction of a future measurable event. That is why we compare similar previous holiday seasons instead of previous months on this year's calendar.

Making Predictions with Random Data

Sometimes we may be asked to make a prediction when there is no discernible pattern to the past. What analysis measurement strategy of this past data would you use to make a prediction for the 13th month from this chart?

[None! The data are too random to make a credible prediction using any method. Do not let anyone put you in a position where they expect you to make a credible prediction from random data!]



Strategic Date Math

It is easy to monitor a department's budget or production this year plotted against past production records using "date math" if you have access to a spreadsheet application such as Microsoft Excel.



Here is how "date math" works. The spreadsheet electronically counts the number of days that have passed since January 1, 1900 – the century in which computers were invented.

If you know the "date number" – the number of days since January 1, 1900 – of the date at the beginning of a period and the "date number" of the date at the end of the period, you can subtract the earlier date from the later date to discover how many days have transpired. (It is much easier than it sounds.)

On the next page, we will work with a budget and compare current expenses with a forecast. Before we start, it is important that we take a minute to make sure we understand how to format the spreadsheet dates to a more useful form.

We convert the dates of 1/1/2011 and 8/31/2011 to their respective date numbers by formatting them to "number" with "0" decimal places.

Now we see that January 1, 2011 is date number 40544 and August 31, 2011 is 40786. We can easily find how many days are between them by doing a simple formula subtracting the 1/1/2011 cell from the 8/31/2011 cell and we get 242 days.

The need to do this will become evident on the next page.

The screenshot shows the Microsoft Excel interface. The spreadsheet has the following data:

	A	B	C	D	E	F	G	H
1	1/1/2011	40544						
2	8/31/2011	40786						
3			242					

The "Format Cells" dialog box is open, showing the "Number" category selected. The "Sample" field displays "40786". The "Decimal places" are set to 0. The "Negative numbers" list shows options: "-1234", "1234", "(1234)", and "(1234)".

Budget Monitoring Example

The Mail Services Department has a budget this year of:

- \$450,000 for regular wages;
- \$25,000 for overtime during year-end mail outs;
- \$243,000 for transportation costs (courier vehicle fuel and maintenance);
- \$1,430,000 for postage.

You have been asked to follow the actual vs. budgeted expenses to serve as foundation data for your planning forecasts next year. Here is the situation as of August 31, 2011:

	1/1/2011	40544			
	8/31/2011	40786			
		242			
		242	Days have transpired this year		
		365	Days in this year		
		66%	The % of the year that has passed		
		34%	The % of the year remaining		
					Calculate the budget status to see if you are <u>ahead</u> or <u>behind</u> and by how much \$ and %.
			<u>Actual</u> Balance	<u>Proportional</u>	
			8/31/2011	Bal on 8/31/11	
Regular wages	\$450,000	\$103,452	\$153,000.00		
Over Time	\$25,000	\$22,758	\$8,500.00		
Transportation	\$243,000	\$62,357	\$82,620.00		
Postage	\$1,430,000	\$360,450	\$486,200.00		



What do these “proportional” numbers tell us about the department’s budget as of 8/31/2011?

[They tell us where we should be ‘proportionally’ which assumes a steady use of resources in each category. Regular wages, transportation, and postage may be predictable assuming no mergers or major changes have occurred.

“Overtime” is less predictable because that has to consider the flu season, vacations, and acts-of-God, etc. These items are usually not predictable enough to rely on a proportional estimation.]

When is it useful to use a “proportional” analysis of your budget? [Use it only when you are confident of a steady use of resources or a steady production rate.]

When is it not useful to use a “proportional” analysis?

[When you are less confident of steady trends such as the severity of ‘flu season” and how much overtime you will need; how long it will take for your crew to master the new equipment; or estimating a new type of project that you have never done before.]

Sitting at the Table

Once again, this DIY project is designed on the premise that you want to develop strategic thinking skills so you can increase your value to the organization and enhance your career. (We are all in favor of career enhancement!) And the example we are using is based on the situation back on page 6.

Since HR does not produce any products, its whole existence is based upon work processes involving hiring, firing, training, performance management, benefits, compensation, and anything else that comes up. So the key here is to ask "Where can we gain work process improvements that will increase efficiency?" Since greater efficiency means more output per unit of work time, this is certainly worth pursuing more. And the greater output always involves human interaction somewhere in the flow.

Our next foray into the world of strategic thinking is to take on the role of a performance consultant. We see this role as a sub-set of strategic thinking like this: the strategic planner considers the overall plan for the future (economic, political, social, technological, etc. factors) while the performance consultant part of him/her looks specifically at the workforce that needs to take us to the future. If the employees exhibit performance problems, our workflow is not fully efficient, and our chances for achieving our organizational goals are diminished.

Performance Problem Analysis Flowchart

Here is a series of questions that will help you determine if the source of the employee's difficult behavior is based on their performance issues or something beyond their control. Use it to make sure you have eliminated any possible reason why the employee does not perform to satisfaction BEFORE taking any other corrective actions.

Step	Possible Problem	Ask this...
	Before you begin trying to find the source of the problem, ask yourself, "Is this issue worth pursuing?"	How do you know if it is worth pursuing?" (If it interferes with work, it is worth pursuing! If it is only a nuisance or aggravation, but does not interfere with work, it may be best to leave it alone because of stirring up more problems.)

Step	Possible Problem	Ask this...
If it is worth pursuing, go to STEP #1. If not, you are done! Remember, you can stop anytime the problem is "sufficiently solved." (This means it is not worth the time or effort to fix it better.)		
Step #1	Ask yourself, "Are my expectations clear?"	What do you ask your employee here? "I want to make sure I did a good job of explaining. Please tell me what you think I expect you to do".
If that solves the performance problem, you are done. Otherwise, go to the next step.		
Step #2	Ask yourself, "Are the resources adequate?"	What do you ask your employee here? "Do you have everything you need to do what I expect?"
If that solves the performance problem, you are done. Otherwise, go to the next step.		
Step #3	Ask yourself, "Do they get fast and frequent feedback on their performance?"	What do you ask your employee here? "How do you know how you are doing?"
If that solves the performance problem, you are done. Otherwise, go to the next step.		
Step #4	Ask yourself, "Does the desired performance seem punishing?" (Hint: What do you usually do if they finish early and others have not finished yet?)	What do you ask your employee (or yourself about the situation) here? (If their "reward" for finishing early is you give them the work the slower people have not finished, you will soon have <u>no one</u> finishing early. You must praise the ones who finish early, let them know you documented their file that they finished ahead of the others, and ask if they will help the slower ones. This way they do not feel that the slackers are getting away with anything)
If that solves the performance problem, you are done. Otherwise, go to the next step.		
Step #5	Ask yourself, "Is poor performance rewarded somehow?" (Hint: What do you usually do if they have not finished yet but others have?)	What do you ask your employee (or yourself about the situation) here? (This is the opposite of above. If they are behind, let them know you documented their file that they were behind and you asked a faster worker to help pick up their slack. This way, they realize they are not getting away with anything.

Step	Possible Problem	Ask this...
If that solves the performance problem, you are done. Otherwise, go to the next step.		
Step #6	Ask yourself, "Is there any penalty for not doing it right?"	What do you ask your employee (or yourself about the situation) here? "Is there any penalty for not doing it right?" (If there were no penalty, why would they stop doing it?)
If that solves the performance problem, you are done. Otherwise, go to the next step.		
Step #7	Ask yourself, "Is their non-performance a genuine skill deficiency?"	What do you ask your employee (or yourself about the situation) here? <ul style="list-style-type: none"> • Can they <u>not</u> do it at all? (If this is the problem, train them.) • Can they not do it very well? (If this is the problem give them a chance to practice.) • Can they do it but just do not want to? (If they can't give you a good reason for not doing it, give their job to someone who will do it.)
If that solves the performance problem, you are done. Otherwise, go to the next step.		
Step #8	Ask yourself, "Can the task be made easier?"	What do you ask your employee here? "Can you think of any easier way you can do this?"
If that solves the performance problem, you are done. Otherwise, go to the next step.		
Step #9	Ask yourself, "Are there any other obstacles?"	What do you ask your employee here? "Can you think of anything keeping you from doing this?"
If that solves the performance problem, you are done. Otherwise, go to the next step.		
Step #10	Ask yourself, "Does the person have the potential to change?"	What do you ask your employee here? "Do you have any plans to change your behavior?" (If they do, keep them, If not, terminate them.)

Have you noticed that every step, except #10, is a factor controlled by management?

This means there is a 90% probability that an employee's performance problem is caused by something controlled by management!

That is the kind of analysis that a strategic planner must be able to do if your plans for the organization's future depend upon employee performance.

Strategic Planning and Workforce Development - the Next Level

We do not pretend that workforce development is a new subject to you and do not mean to suggest that in this course. The reason for the next section is that the most credible Strategic Planners have an in-depth knowledge of what a well-designed and executed workforce development program should look like without having to rely on expensive consultants - at least initially.

Few organizations are large enough to have an in-house training (or L&D - Learning & Development) department to take a lead role in workforce training. Even if one is present, not all training managers have the ability to visualize how the workforce should be developed to support the new goals. But, if a Strategic Planner describes what the outcomes should be, they can usually design the program leading to them.

This section will help the Strategic Planner focus on the future to guide the initial employee development efforts. Otherwise, there is risk of what can happen when employees, especially new hires, are not trained safely, consistently, and methodically by senior employees who think training simply means "do what I do." Some of the concepts we describe may be useful to use when you are working with others who may not grasp them as quickly as you have. We hope it becomes a trusted and useful resource for you.

Finally, if you do not understand more of the learning and development process than just the high-level concepts with their buzzwords, you may not be able to achieve the best L&D program to support your organization's goals or to select the best-qualified consultants. And if you can't do that, your future at the Table doesn't look very bright.

On-boarding vs. New Hire Training

For purposes of clarification for this section, we are making these distinctions between on-boarding and new hire training.

We understand on-boarding to mean the assimilation of employees new to the organization where they may get a tour of the area, badges made, fill out benefits forms, order their office supplies and materials, receive keys if appropriate; i.e., everything needed to help them get "on board" and start to feel at home as part of the group.

We use new hire training as what comes next after on-boarding. Now that they are here, we have to train them to be productive in our environment to support our business goals. This applies to professionals at any level because we are not talking about their technical skills but train them how to use these skills here: i.e., company policies, procedures, best practices, etc.

Whether teaching tangible skills to customer service representative trainees that must be demonstrated before going "live" with customers or simply making sure that even a highly skilled technician understands how he'll perform that skill in OUR environment, there is some degree of training involved. The sooner they can become safely productive, the sooner they can begin building a career with your organization.

The Concept of "Employee Performance Management"

Author's note: Although you know what you understand that phrase to mean, please allow me to describe what it means to me because this section of the course will make more sense if you can see how I view it. (Thank you for your patience.)

Performance management is a process through which an employer:

- provides desirable and measurable performance guidelines supporting business goals for each job function
- trains employees as needed to perform toward those desired outcomes
- objectively measures the outcomes of the process

It also contains the belief that **the most efficient and cost-effective means of productivity is through ensuring the workforce is productive, not just busy.** (Something we discuss at length in our other course, Developing Strategic Business Planning Skills: A DIY Project.)

Therefore, employee training should never occur in a vacuum without these four items as a minimum:

1. Some specific and objective behavioral outcomes in mind (i.e., they must be able to do something new, better, or differently)

2. A means to reinforce the training afterwards. This can be via teaching others what they have learned via “lunch-and-learn” meetings, one-on-one training of coworkers, mentoring, or getting on-the-job feedback from their management. We recommend the trainers communicate frequently with management at all levels so they (management) will know that the desired behavior is being taught.

Look at this training retention chart. The greater the retention, the greater the Return On Investment (ROI) and the better the Strategic Planner looks to the executives:

Training/teaching Method	Retention Rate
Teach Others or Use Immediately	90%
Practice by doing	75%
Discussion Group	50%
Demonstration	30%
Audio-visual	20%
Reading	10%
Lecture	5%

3. A foundation for behavior in every job function based on measurable activities for quality, quantity, and time as much as possible. (Something else we discuss at length in our other course, Developing Strategic Business Planning Skills: A DIY Project.)

4. An organizational understanding, from top to bottom, of the need to express employee performance in measurable terms of quality, quantity, and time as much as possible.

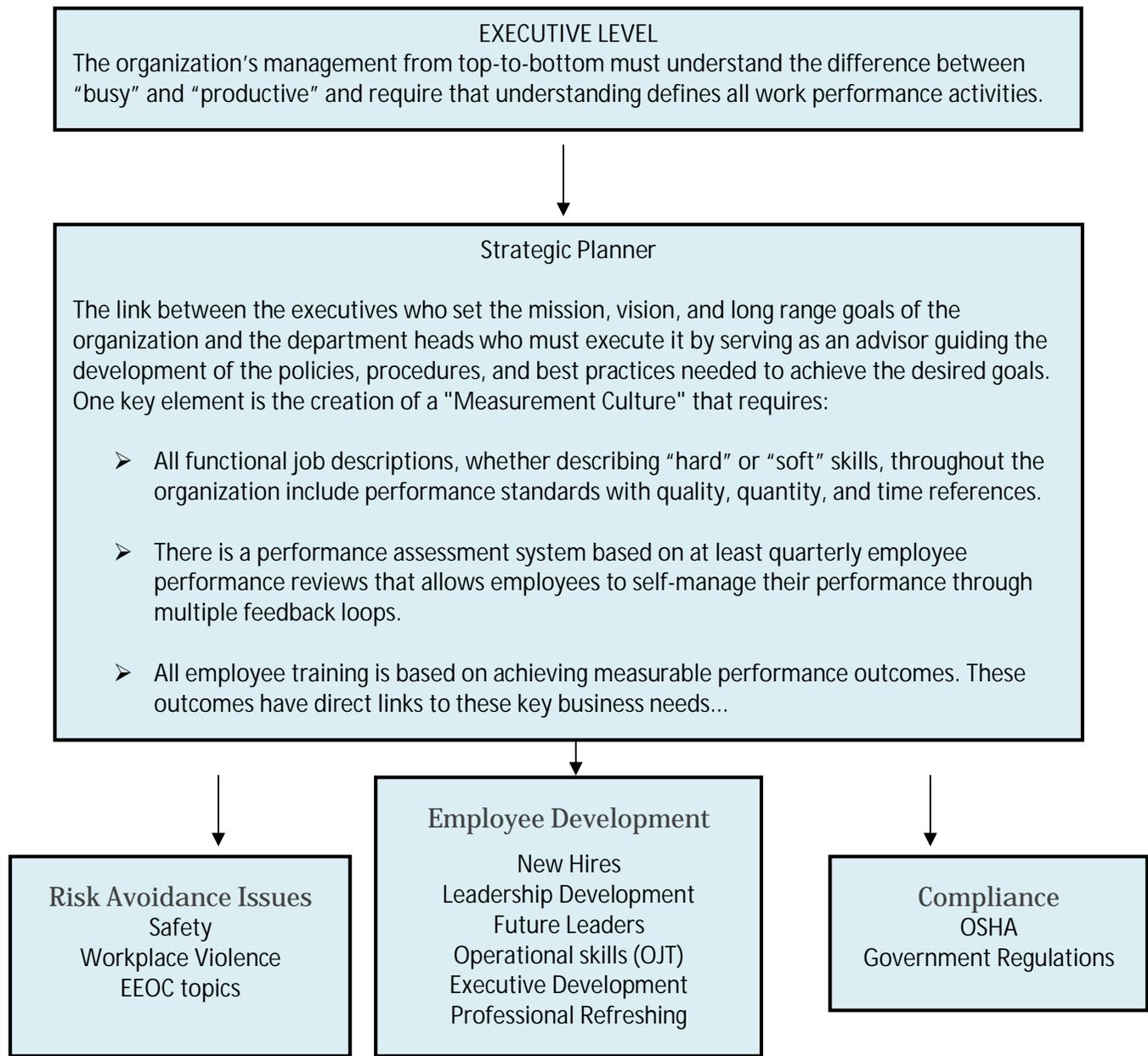
Once again - The Value of MEASURABLE Goals

There are at least four reasons why you insist on the establishment of measurable goals in every training activity:

- Knowing where you are going will help you monitor the progress getting there. If you do not know what your training target is, how will you know when you have reached it? (“When you don’t know where you are going, any road will take you there.”)
- Measurable goals (milestones) along the way to your ultimate destination help you track your progress. If you cannot tell whether you are making progress, how can you make corrections as needed? (This is why there are mileage markers along the interstates.)
- It is easier to link your training to business outcomes. Executives are more willing to fund and expand training if they can see measurable outcomes that either increase productivity or reduce expenses. Reducing operating expenses go right to the bottom line. This is a critical concept for Strategic Thinking.
- Achieving measurable training goals that are linked to business outcomes increase the Strategic Planning function's value to the organization. This helps you become more of a strategic business planner than simply an overhead expense. This is an easy way to become a hero!

The Performance Management “Big Picture”

Performance management keeps the workforce focused like a laser on productivity and that is what drives the company forward. This is a high level strategic view of how performance management begins at the executive level. The Strategic Planner can use this as a model when trying to explain to executives how critical their total support is and for helping managers see how every aspect of their department's training is critical to the success of the organization.



What You Should Know about Training

It is truly rare if there is a professionally staffed and managed training department available to design and deliver the training required to align workforce performance with the organization's goals. It is very likely that your organization's employee training, if it happens at all, looks something like this:

- We 'show' them what to do without explaining "why" and providing documentation.
- We provide little or no instructional material.
- We train employees only when we can spare them from work
- We do not tie training outcomes to business needs. (We train what we want, not need.)
- We use jargon and acronyms without defining their meanings.
- The trainers are subject matter experts who may know the subject but have poor presentation skills
- Other people are usually interrupting the training.
- Our training may not be consistent over a series of meetings.
- We are in a hurry because our personal production goals are not diminished even though we are conducting required training.
- We do not have a way of measuring learning.
- We do not have a consistent and effective means of reinforcing training.
- We tell them all that we remember to tell them.
- Training retention is minimal.
- We sometimes tell them all the things to do but forget to tell them the things not to do.
- We focus on new hires getting training but overlook the older, existing employees that may need it, too

This is the reality of training that you must understand from a strategic standpoint. You can no longer view "training" as sending employees to a class and simply assume:

- It was taught competently
- The material was relevant to actual work conditions
- The employees absorbed everything that was presented
- The employees will retain everything of value
- The employees will apply everything of value on the job

From a strategic standpoint, doing what is necessary to help the fictional new boss "shake this company out of its rut and drag it kicking and screaming into the 21st Century" will require a more in-depth understanding of human performance issues. If you want to be a helpful advisor to the department managers and other key players, you must be able to demonstrate CONFIDENCE and COMPETANCE in your understanding of this critical topic.

Training Beliefs Quiz

(Author's note: While I was a corporate training manager with a large bank in the Southeast, I earned the designation of Certified Performance Technologist from the International Society for Performance Improvement - ISPI - and am confident in the value of these next questions.)

Take a moment to think about these questions...(Answers on the next page)

- How does learning differ from training?
- Why would it be important for a Strategic Planner to know the difference?
- Who is responsible for the identification of the training needs?
- Who is responsible for the design and delivery of an effective training program?
- Who is responsible for the implementation of the training material?
- Who is responsible for the measurement of training results?
- Who is the ORPperson and why should you care? (This is someone you may already know in a different context.)
- What concern would the ORPperson have about an employee who was injured on work-related equipment?

Training Beliefs Quiz Answers

➤ How does learning differ from training?

We differentiate these terms broadly this way: learning focuses on “gaining knowledge” while “training” focuses on ‘applying knowledge’. Employers do not pay employees just to KNOW things but to APPLY that knowledge to produce something.

➤ Why would it be important for a Strategic Planner to know the difference?

So they can make sure all training focuses on PERFORMANCE OUTCOMES - not just knowledge.

➤ Who is responsible for the identification of the training needs?

The department manager identifies what the employee will be paid to do and at what performance levels.

➤ Who is responsible for the design and delivery of an effective training program?

The trainer then designs and delivers training that will enable the trainee to achieve the performance defined by the department manager.

➤ Who is responsible for the implementation of the training material?

The department manager must insure the trainee applies the training on the job. The trainer has no authority on the job unless they are also part of management in that department.

➤ Who is responsible for the measurement of training results?

The trainer’s responsibility is to design the training so trainee progress can be measured and documented.

➤ Who is the ORP person and why should you care?

It is any Ordinary Reasonable Prudent person from outside your organization who may be asked to judge whether your training is fair, objective, and relevant to the jobs they are paid to do. (As an Engineer/Project Manager, you are aware of the concept of the “ORPman” but probably did not have a name for the role.)

- What concern would the ORP person have about an employee who was injured on work-related equipment?

The ORP person would want to see documented proof that the employer trained the employee in the safe operation of the equipment. Otherwise, the possibility of negligence via a lawsuit exists for the employer.



The employee's attorney would claim, "The employer knew or should have known the employee did not know how to operate that machinery safely. Therefore, the employer is guilty of negligence in not providing that training!"

Outsource Training Online can provide a secure, online test platform available for any employee testing 24/7 while awarding certificates of achievement, providing supervisory notifications, and retaining records indefinitely.

Be sure to chisel that red statement into your memory just as it is chiseled into this block of stone! Your professional experience tells you that, if you cannot produce objective documentation that at some time in the past the employee demonstrated a skill or passed a knowledge test, then the decision is likely to go in favor of the employee.

**"IF IT ISN'T
DOCUMENTED,
IT DIDN'T HAPPEN"**



(Author's note: Please consider our course, [Developing a "Bullet Proof" New Hire Training Program](#), to help your department managers understand their role in developing the workforce. Click on the link or course cover to learn more.)

Strategic Production Concepts

Every organization in existence produces something. Whether it is a business producing products (and, it hopes, profits), the county license tag office producing newly registered drivers, or a university producing graduates, there is a series of events which lead to the desired outcomes.

For a Strategic Planner, it is important to understand something about the concept of production (in any setting) and the series of events leading to that desired outcome. If anything disrupts the series, the outcomes change. And if the outcomes change, your plan for the organization's future changes and your personal future at the Table becomes doubtful.

These are the topics we will introduce next:

- Strategic Production Concepts (a factory or a document assembly process)
- Production Work Cycle and Line Efficiencies
- Supply Chain Management
- Capacity Planning
- Vendor Relations
- Marketing Issues

Designing Product Layouts

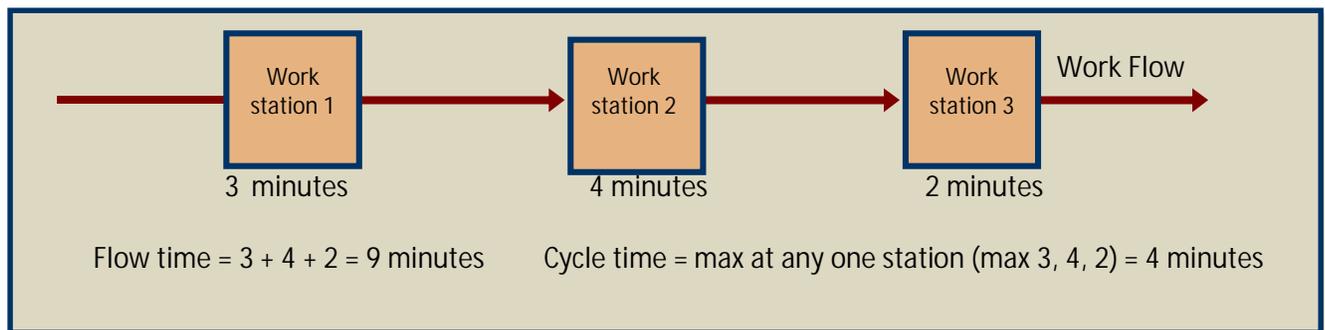
The product layout is the basic assembly line of sequential tasks that Henry Ford immortalized when he created the American auto industry. Although a very straightforward concept, there are some considerations necessary to optimize the potential speed and efficiency of the line. These 'optimization' topics are what a Strategic Planner should understand and be able to discuss CONFIDENTLY and COMPETENTLY.

Some terms that we will use are

- Precedence requirements - tasks that must be completed before doing the next one such as testing the components inside a radio before sealing the outer shell.
- Precedence diagram – a drawing showing the assembly line with work stations arranged so as to honor the precedence requirements
- Work station – any place along the line where work is done on the product
- Line balancing – the process of equalizing the amount of work at each work station so the line keeps moving and no back-ups occur
- Cycle time – the maximum amount of time a part in the assembly process can spend at any single workstation in order to meet production requirements in a balanced line. We emphasize “can spend” because we want to meet some production criteria. Do not confuse this with “does spend” which is the amount of time a part spends at a station if the line is not balanced.
- Flow time – the amount of time it takes a product to emerge from the end of the production line in comparison to when it entered the line. This includes all time spent waiting at any workstation.

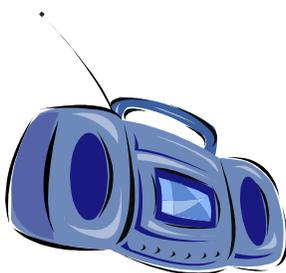
- Line efficiency – is the ratio of the time spent doing work to the overall flow time of an assembly line. The overall flow time may include some idle time at one workstation while work at another takes a little longer for completion.

For example, if the flow time for a product is 200 seconds which includes 40 seconds of idle time at one workstation while work is being done at another, the amount of time the machines were working was $200 - 40 = 160$ seconds. Then $160/200 = 80\%$ efficient. **Line efficiency is a critical portion of strategic planning in production.**



Let's talk about cycle time and see how the term, "the maximum time that can be spent at a work station" applies in a production setting.

Suppose a company wants to produce 100 radios in an eight hour day (or work shift.) The first thing we must do is break the hours into minutes to get the smallest practical time unit available. Therefore, an eight hour day (or shift) is also equal to $8 \text{ hours} \times 60 \text{ minutes in an hour} = 480 \text{ minutes}$. So we now know the company wants to produce 100 radios within 480 minutes.



Our formula for cycle time is $C_t = \text{production time available} / \text{desired units of output}$ or $480/100 = 4.8$ minutes. This means the longest time a radio can spend at any workstation is 4.8 minutes.

It does not matter how many work stations you have in the process because this assumes the radios are working their way along the assembly line continuously. What it DOES TELL YOU is the longest it can sit at any one station is 4.8 minutes if you expect to produce 100 radios in 480 minutes.

Next, we will look at line balancing which is fundamentally a trial and error process.

Let's suppose we work for the Big Sound Radio Manufacturing Company. The company designed a new model, called the Big Blaster that they think will be a huge seller. Based on the drawings we have seen, it looks like there are eight steps in the production process with an estimated time (in seconds) of how long each step should take. This is the sequence of tasks and the length of time to do each. (Time expressed in seconds)

Work Station	Process	Task Time (seconds)
1	Receive the new radio shell, clean it, and place on conveyor belt. (Do this first.)	12
2	Install internal speakers	45
3	Install AM & FM receivers	120
4	Solder all electrical connections - melt weld all plastic connections	30
5	Attached the 120 volt electrical cord to the radio	42
6	Attach the back to the radio (only after all internal work is done)	25
7	Test the radio on AM & FM receivers.	15
8	Place in box, send to shipping department, and get ready for the next one. (This must be done last.)	8

This is what we must determine: (come back and answer these as we move through the lesson.)

- If we set up the production line with the eight steps and times shown above, what will be the cycle time per radio? _____
- If we set up the production line with the eight steps and times shown above, what will be our production capacity for each eight-hour shift? _____
- If we set up the production line with the eight steps and times shown above, what will be our production efficiency for each eight-hour shift? _____

- What is the best line balancing we can achieve on each shift? (You will see which choice is best.)
This is how we will find the answers to these questions.

We will look a little closer at the proposed production schedule.

Work Station (w/s) #	Process	Task Time	Longest time for any task	Idle time waiting for next w/s
1	Receive the new radio shell & clean it. (This must be done first.)	12		
2	Install internal speakers	45		
3	Install AM & FM receivers	120		
4	Secure all connections	30		
5	Attach the 120 volt cord	42		
6	Attach the back (internal work must be completed first.)	25		
7	Test the AM & FM receivers	15		
8	Place in box for shipping. (This must be last.)	8		
	Time in seconds	297		



These are typical questions to consider in a production environment.

- What is the longest time for any single task? _____ Write this amount in each cell in that column. Why should we do that? (This becomes evident soon, also.)
- Can additional tasks be completed and moved before the longest task is finished? _____
- What impact does that “longest task” have on the whole work cycle? (Everything else stops until this part is completed)
- Write in the amount of idle time at each station while waiting for the longest task to be completed.

Some questions we can ask at this point:

Is this the only sequence that we can have? (Answer: The step at station #1 must come first and placing in a shipping box must come last.)

Steps 2 & 3 can be reversed if neither must come before the other and there isn't some other reason why we can't such as having the AM & FM receivers in the cabinet would make it hard to install the speakers. We will have to talk to the workers who actually do this to find the answer. (Talking to the people doing the work is a simple concept many managers do not appreciate.)

- Step 4 can only come after we make the connections.
- Step 5 must have something inside the radio to which we can attach the cord.
- Step 6 must come now because we cannot put on the back until everything is placed inside.
- Step #8 must be last because it goes to shipping after assembly.

The only flexibility we have is reversing steps 2 & 3 if that would help.

- What is the longest time spent at any workstation? (Answer: 120 seconds at step 3.)
- What happens to the whole assembly line while step #3 occurs? (Answer: The whole line stops and waits.)

This is what production actually looks like with all workstations filled and taking into account delays while longer processes are completed.

Work Station #	Process	Task Time	Longest time for any task	Idle time waiting for next work station
1	Receive the new radio shell & clean it. (This must be done first.)	12	120	108 (We work for 12 seconds and wait for another 108 until station 3 completes its work of 120 seconds.)
2	Install internal speakers	45	120	75
3	Install AM & FM receivers	120	120	0
4	Secure all connections	30	120	90
5	Attach the 120 volt cord	42	120	78
6	Attach the back (we must complete internal work first.)	25	120	95
7	Test the AM & FM receivers	15	120	105
8	Place in box for shipping. (This must be last.)	8	120	112
Time in seconds		297	960 Flow Time	663

This is an important consideration that must not be overlooked when looking at production - **the longest time spent at any workstation delays every workstation once the line is "full" and each station is engaged in production.**

More Questions

- If we set up the production line with the eight steps and times shown above, what will be our production capacity for each eight-hour shift?

We have seen that it takes 960 seconds for a complete "flow" in the assembly of one radio. Since our answer for flow time is expressed as seconds, we must convert our 8-hour work shift to seconds so we are dealing with similar amounts.

The 8-hour shift has 60 minutes in each hour with 60 seconds in each minute. Therefore, $8 \times 60 \times 60 = 28,800$ seconds per shift. If it takes 960 seconds to build a radio and we have 28,800 seconds on the shift, we can build $28,800 \div 960 = 30$ radios per shift.

- If we set up the production line with the eight steps and times shown above, what will be our production efficiency for each eight-hour shift?

We found the flow time to be 960 seconds. During this time, work is being done for only 297 seconds: the rest of the cycle is idle time waiting for the longest task to be completed so the line can move again. The efficiency of the line is determined by dividing the total work time within a flow by the length of the work flow. This is $297 \div 960 = 30.9\%$ efficient.

- What is the best line balancing we can achieve on each shift?

We will rearrange the tasks slightly to reduce as much idle time as possible. We will still acknowledge the sequence requirements (which step must come before any others) as we do this.

Work Station #	Process	Task Time	Longest time for any task	Idle time waiting for next w/s
1	Receive the new radio shell & clean it. (This must be done first.)	12	120	108
2	Install AM & FM receivers	120	120	0
3	Install internal speakers	45	117	
	Secure all connections	30		
	Attach the 120 volt cord	42		
	Total time at this workstation =			
4	Attach the back (internal work must be completed first.)	25	48	120
	Test the AM & FM receivers	15		
	Place in box for shipping. (This must be last.)	8		
	Total time at this workstation =			
	Time in seconds	297	480	183

Put the longest task as close to the front as you can while still acknowledging sequence priorities.

Put the next longest task next.

These are sequence priorities.

We collapsed eight separate steps into four, grouped three steps together for completion (117 seconds) as station #3 while waiting for step #2, and three steps at station #4 for 48 seconds. **This means we can save money on purchasing workstations and hiring workers for each station.**

Work flow time remains at 297 seconds because it still takes the same amount of work to build each radio. However, we have reduced the waiting time significantly. This means the cycle time is lower, too. This means we can produce more radios during each shift.

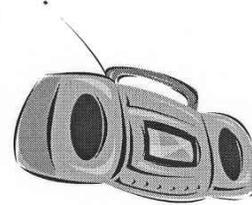
If it now takes 480 seconds to build a radio and we have 28,800 seconds on the shift, we can build $28,800 \div 480 = 60$ radios per shift.

Efficiency is now $297 \div 480 = 61.9\%$.

The next page contains a sample of how a spreadsheet and charts would look as we compare the current production with our proposed.

This is the current process with 8 workstations.

THE CURRENT PROCESS OF PRODUCING RADIOS



Note: When we do these calculations, we are looking for *very close approximations, not exact amounts*. We do not measure the time spent as the first few products move into the assembly line and fill all the work stations (w/s) nor the time spent as the production line empties at the end of the day.

Work Station #	All times are in seconds	Time to do the task and move it to the next w/s	Longest time any one task	Idle time waiting for the longest task to end.
1	Receive the new radio shell, clean it, place on conveyor belt. (This must be done first.)	12	120	108 seconds waiting after the production line is "full"
2	Install internal speakers	45	120	75 seconds waiting after the production line is "full"
3	Install AM & FM receivers and connect to speakers	120	120	0 seconds waiting after the production line is "full"
4	Solder all electrical connections - melt weld all plastic connections	30	120	90 seconds waiting after the production line is "full"
5	Attached the 120 v. electrical cord to the radio	42	120	78 seconds waiting after the production line is "full"
6	Attach the back to the radio (only after all internal work is done)	25	120	95 seconds waiting after the production line is "full"
7	Test the radio on AM & FM receivers.	15	120	105 seconds waiting after the production line is "full"
8	Place in box and send to shipping dept. And ready for next. (This must be done last.)	8	120	112 seconds waiting after the production line is "full"
		297	960	663

Seconds of actual work to produce a radio

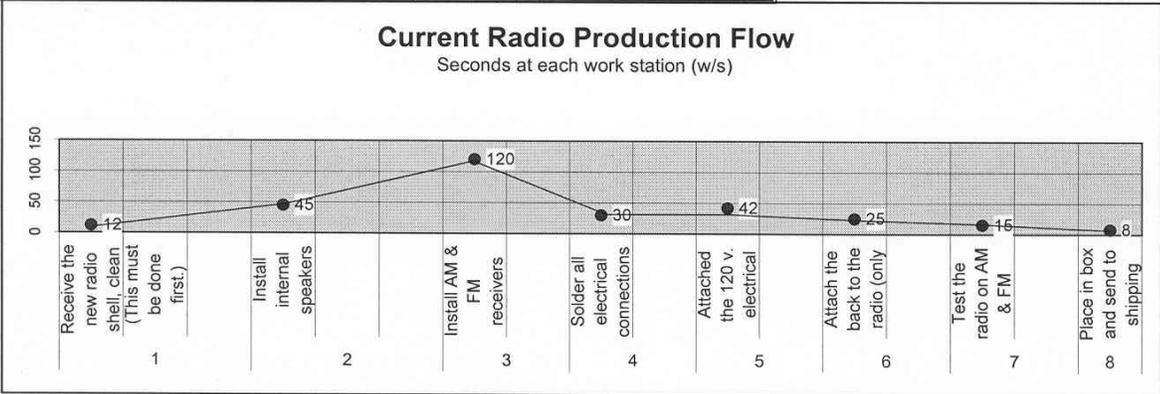
Given information			
shift/hrs.	min/hr.	sec/min	seconds of work per shift
8	60	60	28,800

This is the actual cycle time needed to move one radio through all of the work stations.

Efficiency % = $\frac{\text{Work Time}}{\text{Cycle Time}}$ or $E\% = \frac{WT}{CT} = \frac{297}{960} = 30.9\%$ Line Efficiency

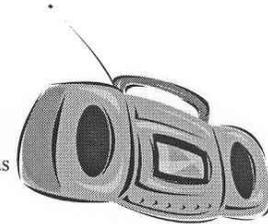
Radios produced/shift = $\frac{28,800 \text{ seconds in a shift}}{960 \text{ seconds to produce each radio}} = 30 \text{ radios/shift}$

Check your calculations!!
TOTAL CYCLE TIME SHOULD EQUAL WORK TIME + WAITING TIME.
 Work time = 297
 Wait time = 663
 Total cycle time = 960



This is the recommended process with 4 workstations.

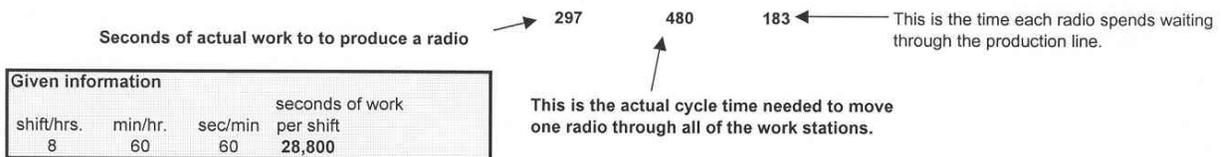
THE PROPOSED PROCESS OF PRODUCING RADIOS



We will put as many tasks at each station as possible with these limitations:

1. We acknowledge the tasks that must be first and last by putting them first and last.
2. We put the longest task as close as we can to the front of the line.
3. We group all other tasks which do have a prerequisite in descending assembly time at each station so long as assembly time at each w/s does not exceed the LONGEST task in the whole line.

Work Station #	All times are in seconds	Time to do the task and move it to the next w/s	Longest time any one task	Idle time waiting for the longest task to end.
1	Receive the new radio shell, clean it, place on conveyor belt. (This must be done first.)	12	120	108 seconds waiting after the production line is "full"
2	Install AM & FM receivers Note: We still connect speakers and receivers at w/s #3	120	120	0 seconds waiting after the production line is "full"
3	Install internal speakers and connect to receivers Solder all electrical connections - melt weld all plastic connections Attached the 120 v. electrical cord to the radio	45 30 <u>42</u> 117	120	3 seconds waiting after the production line is "full"
4	Attach the back to the radio (only after all internal work is done) Test the radio on AM & FM receivers. Place in box and send to shipping dept. And ready for next. (This must be done last.)	25 15 <u>8</u> 48	120	72 seconds waiting after the production line is "full"

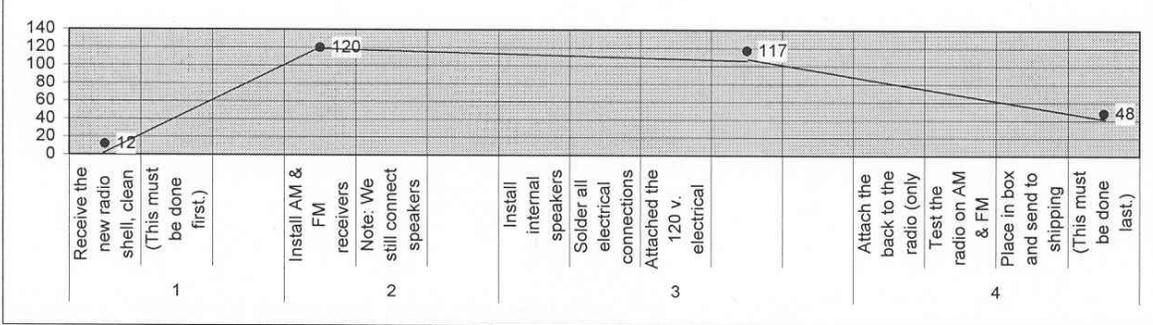


$$\text{Efficiency \%} = \frac{\text{Work Time}}{\text{Cycle Time}} \quad \text{or} \quad \text{E\%} = \frac{\text{WT}}{\text{CT}} = \frac{297}{480} = 61.9\% \text{ Line Efficiency}$$

$$\text{Radios produced/shift} = \frac{28,800 \text{ seconds in a shift}}{480 \text{ seconds to produce each radio}} = 60 \text{ radios/shift}$$

Check your calculations!!
TOTAL CYCLE TIME SHOULD EQUAL WORK TIME + WAITING TIME.
 Work time = 297
 Wait time = 183
Total cycle time = 480

Proposed Radio Production Flow



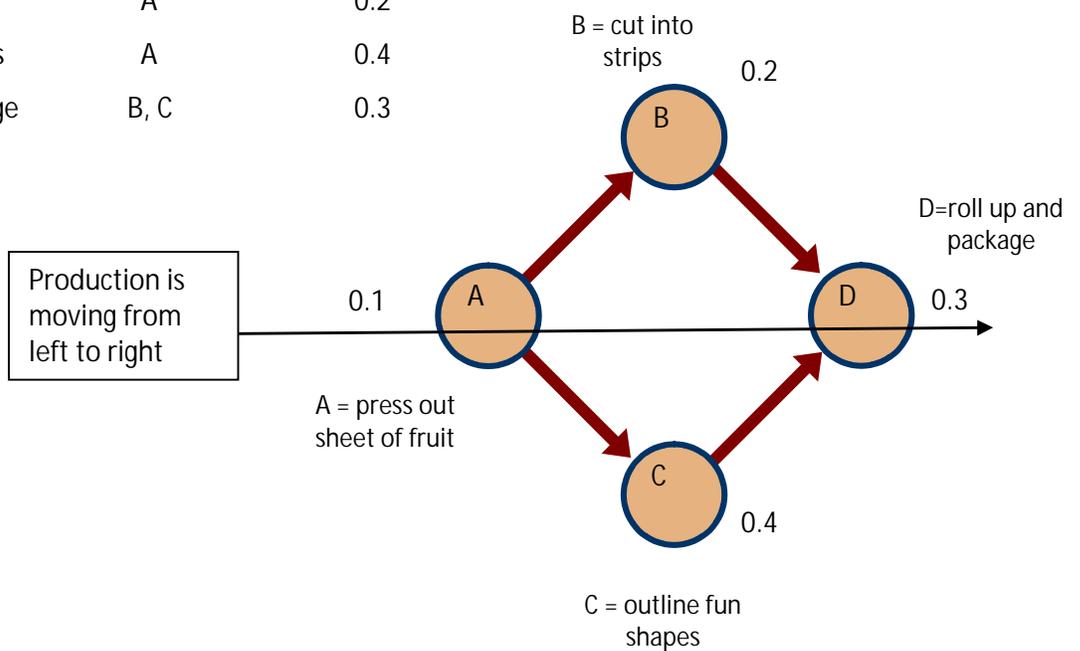
Designing With Precedence Considerations

Here is another way of line balancing that considers the precedence requirements as we package food. We will use the information in the boxes below.

Draw and label a precedence diagram

1. Calculate desired cycle time required for the line (the most that can be spent at any one station and still give us the daily production we need)
2. Calculate theoretical minimum number of workstations (we will do this next)
3. Group elements into workstations, recognizing cycle time and precedence constraints
4. Calculate the efficiency of line
5. Determine if theoretical minimum number of workstations or an acceptable efficiency level has been reached. If not, go back to step 4.

Station	Work Element	Precedence	TIME (MIN)
A	Press out sheet of fruit	—	0.1
B	Cut into strips	A	0.2
C	Outline fun shapes	A	0.4
D	Roll up and package	B, C	0.3



How many workstations will we need to have for this example?

Station	Work Element	Precedence	TIME (MIN)
A	Press out sheet of fruit	—	0.1
B	Cut into strips	A	0.2
C	Outline fun shapes	A	0.4
D	Roll up and package	B, C	0.3

Station	Work Element	Precedence	TIME (MIN)
A	Press out sheet of fruit	—	0.1
B	Cut into strips	A	0.2
C	Outline fun shapes	A	0.4
D	Roll up and package	B, C	0.3

This assumes a 40 hour production week and a desire to produce 6,000 units per week. First, we convert 40 hours into minutes by multiplying 40 hours x 60 minutes/hour to get 2,400 production minutes per week.

If we want to produce 6,000 units during these 2,400 minutes, we see we have only .4 minutes available to produce one item (2,400/6,000 = .4)

Our chart above shows the maximum cycle time is .4 minutes at step C and the flow time is 1.0 minutes (.1 at A; .2 at B, .4 at C, and .3 at D = 1.0 minute.)

$$\text{Cycle Time} = \frac{40 \text{ hours} \times 60 \text{ minutes / hour}}{6,000 \text{ units}} = \frac{2,400 \text{ minutes}}{6,000 \text{ units}} = 0.4 \text{ minutes/unit}$$

$$\text{Number of workstations required is} = \frac{0.1 + 0.2 + 0.3 + 0.4}{0.4} = \frac{1.0 \text{ minute max cycle time}}{0.4 \text{ minute max time at Station}} = 2.5 \rightarrow 3 \text{ workstations}$$



$$\text{Number of workstations required is} = \frac{\text{Total time to complete 1 cycle}}{\text{Longest time within the cycle}}$$

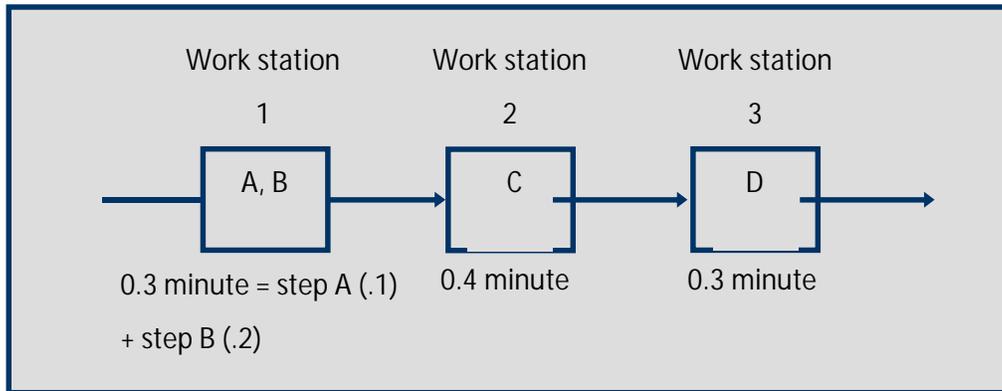
(We cannot have less than a whole workstation)

Here is the line balancing calculation for this process:

Cycle Time = 0.4

Number of workstations needed = 2.5

(i.e., 3 stations since we can't have less than a whole one.)



$$\text{Efficiency} = \frac{0.1 + 0.2 + 0.3 + 0.4}{3 \times (0.4)} = \frac{1.0}{1.2} = 0.833 \text{ aka } 83.3\%$$

Total working time = 1.0
Flow time = working time + idle time

3 workstations x the longest time at any one station (the cycle time) of .4

Here is another practice opportunity for streamlining an office workflow.

Department: Accounts Payable Date observed: June 23-24

Job Observed: Reimbursing expense reports

Observer: Logan Grant

OBSERVATION CODES

W = Working (doing what they are paid to do) M = Moving from work station
 I = Idle (any time waiting or not working) F = Filing (Or storing something)

What comments can be made about improving the workflow based on this example?

Step #	Describe the Step	Code	Distance in feet	Time in min/sec	Comments
1.	Goes to incoming mail area to get expense reports and returns to work station (desk)	M	70' r/t	0:45	(next page)
2.	Opens envelope, organizes receipts.	W	-	1:15	
3.	Notices some expense code fields are empty, looks up proper codes.	W	-	2:10	
4.	Completes authorization to reimburse form on PC and send to the shared printer.	W	-	0:15	
5.	Goes to shared printer to get form	W	25	0:10	
6.	Waits while admin assistant finishes printing new parking policy.(Admin assistance goes to get more paper.)	I	- 60' r/t for admin	2:15	
7.	Takes printed form to boss for review and approval.	M	45'	0:20	
8.	Boss on the phone – clerk waits	I	-	3:15	
9.	Goes to copier to make 2 copies of approved form	W	35'	0:25	
10.	Copier toner low. Must find new cartridge and refill	W/I	-	3:50	
11.	Makes copies and back to desk	W	35'	0:20	

12.	Cuts reimbursement check and places it into I/O envelope.	W	-	2:00	
13.	Starts at step 1 again				

Summary: Time for 1 complete work cycle: 16:50 minutes/seconds

Take a few minutes to consider each step. Then list some questions that you would ask about each step in this situation. At this point, we are not ready to make any recommendations for change: we are just asking questions to make sure we clearly understand the situation.

Comments about the Workflow

Step #	Describe the Step	Code	Distance in feet	Time in min/sec	Comments
1.	Goes to incoming mail area to get expense reports and returns to work station (desk)	M	70' r/t	0:45	Can we bring the mail to them?
2.	Opens envelope, organizes receipts.	W	-	1:15	
3.	Notices some expense code fields are empty, looks up proper codes.	W	-	2:10	Print most common codes on the form? On-line reference?
4.	Completes authorization to reimburse form on PC. Sends to the shared printer.	W	-	0:15	
5.	Goes to the shared printer to get form	W	25	0:10	
6.	Waits while admin assistant finishes printing new parking policy. (Admin assistance goes to get more paper.)	I	- 60' r/t for admin	2:15	Store paper at printer? Dedicated printer for accounts payable?
7.	Takes printed form to boss for review and approval.	M	45'	0:20	Authorize clerks to OK up to a threshold?
8.	Boss on the phone – clerk waits.	I	-	3:15	
9.	Goes to copier to make 2 copies of approved form.	W	35'	0:25	
10.	Copier toner low. Must find new cartridge and refill.	W/I	-	3:50	Check all copiers at end of day for toner and paper to be ready for next day?
11.	Makes copies and back to desk.	W	35'	0:20	
12.	Cuts reimbursement check and places it into I/O envelope.	W	-	2:00	
13.	Starts at step 1 again.				

Supply Chain Management

The supply chain of a business includes all of the facilities, functions, and activities involving the flow and transformation of goods and services from raw materials to final customer, as well as the associated information flows. It is an integrated group of processes to “source,” “make,” and “deliver” products.

As a Strategic Planner, you should become more aware of the supply chain directly involving your products or the supply chains of the vendors upon whom you most depend. If your biggest vendors have weaknesses in their supply chains, that can impact your future. (Of course your vendors will never admit to weakness but if you understand something about them, you can ask them perceptive questions when labor strikes, weather disasters, or bridges collapsing are in the news and may impact them.)

There are basically two different business models with supply chains:

- Manufacturers of finished goods with very distinct flows of materials from suppliers and out to consumers (see the diagram on page 66).
- Service companies whose supply chains are not so easily described because they do not focus on the flow of physical goods but rather on human resources and support services. They are often more compact and less extended than their manufacturing counterparts.

The key to success of supply chain management whether it is manufacturing or service is DATA. There are three critical elements of using that data that determines the success of a business. It must:

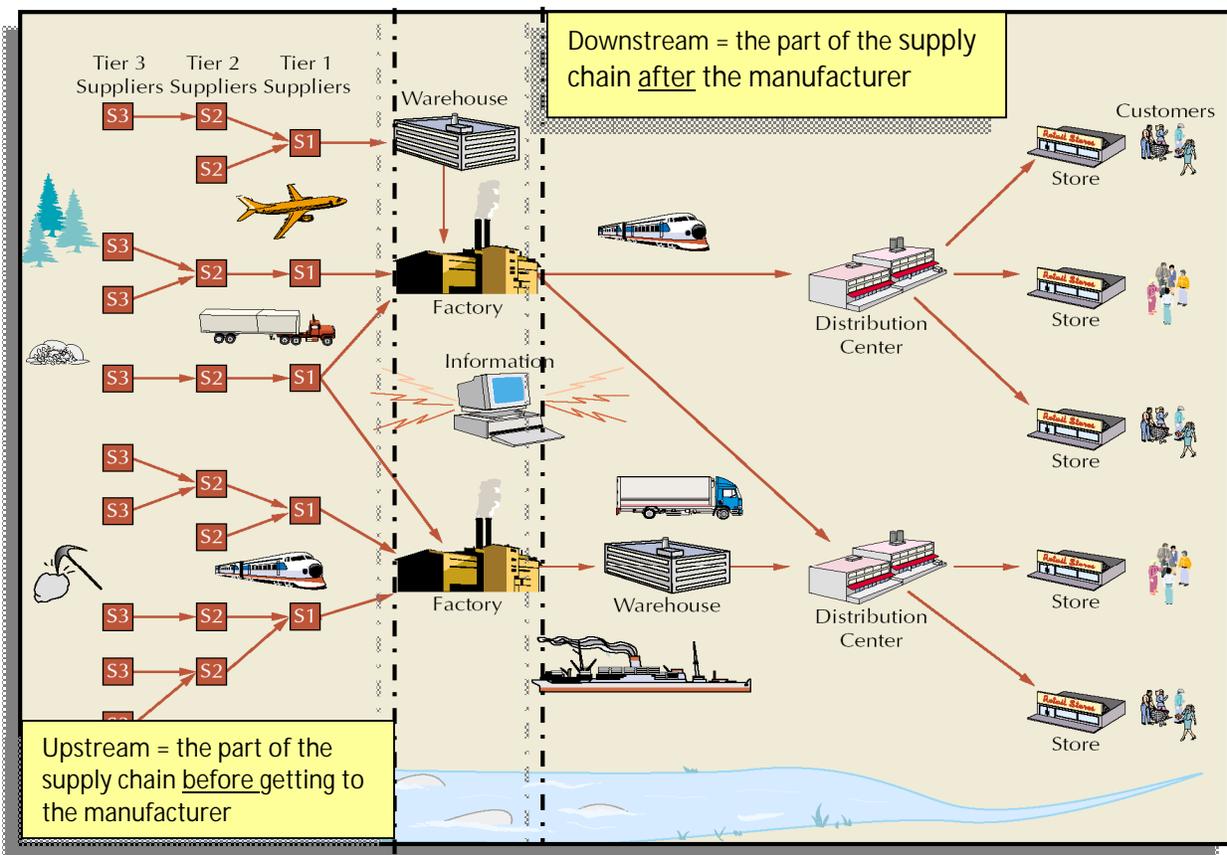
- 1) Collect it from their customers to learn what they want, how they want it, and when it must be there (the demand side of the equation)
- 2) Interpret it carefully to improve:
 - a) Their production, purchasing, and staffing forecasting
 - b) Inventory management (enough of the right inventory to meet customer demand but not tie up too much capital in it)
 - c) Planning for growth
- 3) Share it with suppliers to make sure their flow of needed materials stays reliable.

This picture tells us a lot about the supply chain concept.

Supplier Tiers - First tier suppliers (S1) provide materials that are ready for the manufacturer without additional processing. Second tier (S2) means it needs one more step of preparation before going to the manufacturer and so forth for additional tiers (S3).

Information – this is the heart of an effective supply chain as data is exchanged as close to real time as possible between suppliers, the manufacturer, distribution centers, and end-user access at stores.

Distribution Centers & Outlets to customers – the customer end also provides the “demand” which helps the factory forecast future needs so they can contact their various tiers of suppliers to begin the cycle.



Service Providers

Although we primarily think about supply chains as they relate to manufacturing, it is important to apply the same model to service providers such as a dentist, a lawn service business, a community services agency, OR YOUR ORGANIZATION.

A dentist must purchase equipment (and have it serviced as necessary) and supplies such as drugs used in their office procedures and that bag of goodies they always give you after cleaning your teeth with the new toothbrush, dental floss, and maybe a travel-sized tube of toothpaste inside.

They are very focused on the customer interaction aspect of their business because it's their employees who clean the teeth or assist in the more serious dental procedures that interact with their patients and determine, to a large extent, whether the patients stay with them or look for another provider.

The lawn service provider must have sufficient equipment and tools from a supplier plus enough employees to make their business successful. They may not interact with customers as much as a dentist's employees do but customer satisfaction and reliability is still an important element of their job.

The community service provider must also obtain materials (depending on the nature of their services) from suppliers and, using the skills of their employees, apply those materials appropriately in their service to their customers. Any disruption in the flow of their supplies can mean a breakdown of service.

What are the various supply chains that your organization relies upon? Are there any opportunities for expense reduction within or across them?

Various “Chain” Terms

The word “chain” has been used in a wide range of references dealing with manufacturing or services and has become fairly universal. This is a breakdown of their current usage for familiarization:

Value chain – It is every step from raw materials to the eventual end-user where its “value” increases steadily as a result of something being done to it.

For example, a cabinet manufacturer uses oak as a primary ingredient of his product. Going to the source of that material, we see the logger who cuts down the tree and sends it to a saw mill. This adds value to the wood because it is no longer in the forest but getting closer to becoming a cabinet.

The saw mill adds additional value by cutting the raw tree trunk into boards and pressing the scrap into a thin veneer for cabinet facing. This wood is shipped to the cabinet maker.

The manufacturer adds value by transforming the finished oak lumber into the cabinets which are sent to the retail outlet for the builder/consumer.



The builder adds value to the cabinets by installing them in the new home he is building and staining them to complement the colors in the house.

Supply chain – the sum of all activities that gets raw materials and subassemblies into the manufacturing operation. The ultimate goal is the same as that of value chain but it does not emphasize the increasing value of the item at each stop in its trip to the manufacturer: this focuses more on the flow of the materials into and out of the manufacturer.

Demand chain – This focuses on the end-users and seeks to know more about what their customers want (their “demand” from the manufacturer) in terms of quality, quantity, and delivery time of particular items. The more data they can collect from the demand side means they can improve their forecasting projections.

Better forecasting means being more specific in buying raw materials (thus wasting less) from suppliers and thus, carry a lower inventory of raw materials in the factory. As the quantity of the data exchange between end-users, manufacturers, and suppliers increases, the greater the opportunities for just-in-time supply delivery.

How does the supply chains of work processes work within your organization?

Are there any opportunities for improvement there?

Supply Chain Management (SCM)

Traditionally, each segment of the supply chain – upstream or downstream – tended to focus on its own part of the process. The manufacturer's Accounts Payable (AP) department focused upstream on taking as long as possible to pay suppliers without incurring late charges while Accounts Receivable (AR) spent their time looking downstream to getting paid from consumers as quickly as possible.

Inventories commonly bulged with materials that were no longer needed or were in greater quantities than simply having "safety stock" (an emergency amount of inventory in case we were caught short for some reason) on hand. The costs of carrying that inventory were either not considered or deemed too difficult to calculate accurately.

However, the evolution of technology from telephones, to faxes, to real-time data via the internet has radically changed the way successful manufacturers view the management of their supply chain. Not only does supply chain data flow via the internet but financial data also moves to and from suppliers, customers, and the bankers who finance it all. In today's world, a successful manufacturer must take a holistic view of the entire supply chain as well as rethink the relationship they must have with their vendors.

Strategic Planner question: How much data flows between your organization and its vendors? Could enhancing that flow be useful in helping to achieve the goals the boss wants to make?

Uncertainties in the Supply Chain

In an ideal world:

- A manufacturer would know exactly what the customer wants, when they expect it and the extent of the quality and quantity demanded.
- The suppliers would always deliver on time and provide the quality and quantity of exactly what we wanted.
- Our customers would always pay on time (or earlier).
- We would pay our suppliers at the last possible moment before incurring finance charges (and they would be content to wait for it).
- The employees and equipment would always work to maximum productivity.
- We would grow at a steady and predictable rate and our investors would love us.

Obviously, we don't live in an ideal world but it does help us identify some of the obstacles and opportunities keeping us from it. Let's look at these 'ideal world' components and talk about what we can do about them in the real world.

The ideal world: A manufacturer would know exactly what the customer wants, when they expect it and the extent of the quality and quantity demanded.

The real world: The goal of SCM is to develop an ability to respond to uncertainty in either the upstream or downstream sides of the equation without creating costly excess inventory. [Some excess inventory is necessary as insurance against supply chain uncertainty. The key is to determine just how much we need without being excessive.]

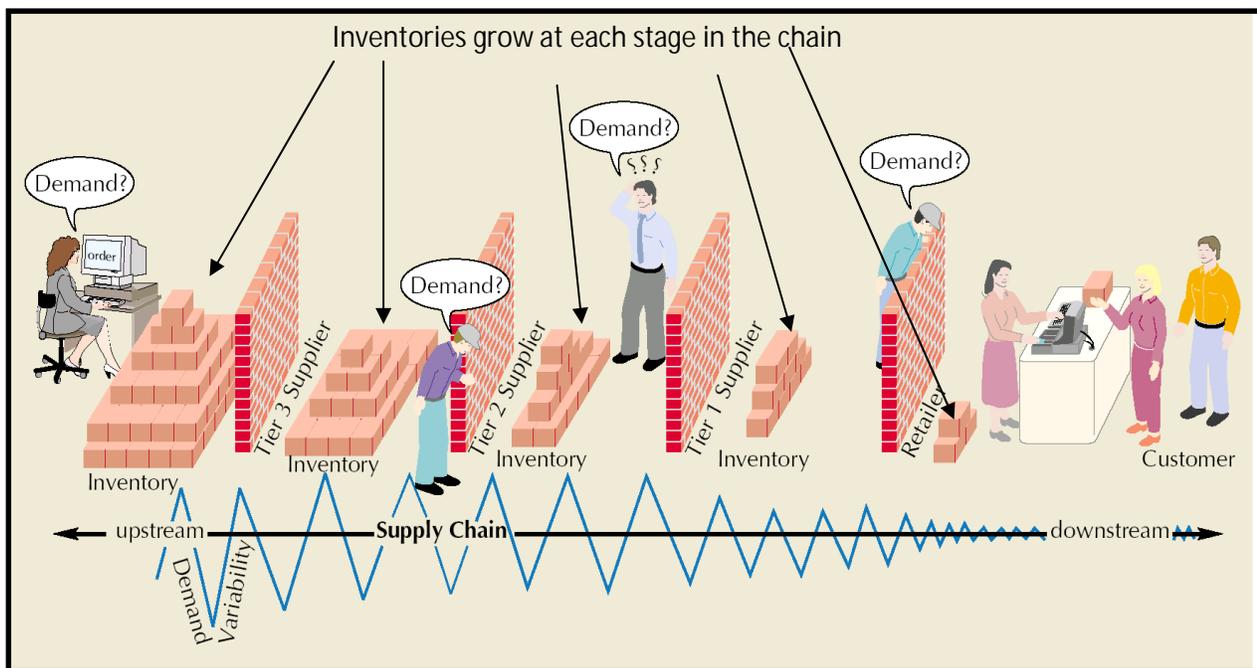
Typical factors that contribute to uncertainty in the supply chain include:

- Inaccurate demand forecasting (Question: could your organization improve its needs forecasting & share that data with your vendors?)
- Long variable lead times
- Late deliveries
- Incomplete shipments
- Product changes

- Batch ordering
- Price fluctuations and discounts
- Inflated orders

One aspect of life in the real world of SCM is the Bullwhip Effect – what happens when slight demand variability is magnified as information moves back upstream in the data flow from the consumers.

Suppose each participant in the supply chain experiences low confidence in their forecasting abilities based on inaccurate demand data from the ultimate consumer. Suddenly, each begins to look more to their own security when placing orders and hold a little inventory as insurance against this uncertainty. As inventories grow, downstream customer service suffers because the needed goods are being stored, not shipped. Production and delivery schedules are missed while associated costs increase.



Note: As a Strategic Planner, there may be many opportunities for process improvement within your organization's supply chain if you have the inclination and time to pursue it fully.

Capacity Planning

Long term capacity planning is a strategic decision for a company that must be carefully researched before implementation. The placement of equipment and its related work and maintenance access, material and work flows, plus potential expansion is critical because plant design and construction are normally tied to it. Clearly, this is an example of form following function.

As a Strategic Planner, you must understand enough about this concept to raise the necessary questions and press for the critical answers that will help your organization adjust as necessary for the future. We'll touch on the fundamental considerations associated with capacity planning so you can converse more knowledgeably with plant designers, industrial engineers, and representatives of operations, procurement, project management, and safety.

Concepts of Capacity

Capacity is about an organization's capability of producing something. Planning for this capacity typically happens at a variety of levels and detail.

An organization's capacity is pulled by customer demand (if they didn't want it, why would you make it?) and pushed by the receipt of raw materials from suppliers. In a perfect world, the demand would be constant, the supplies on time and in the exact quantities and quality we need, while our machines would hum along at peak efficiency. [Remember, also, that we are not just talking about the industrial world here: "production" also applies to assembling complex documents such as all the paperwork associated with buying a home, or serving customers at the drive up window of a fast food outlet.]



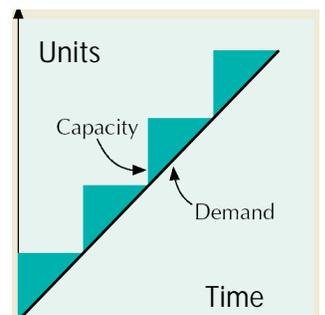
As we mentioned in the last section, our customers would pay early and we would pay our providers (suppliers) at the last possible minute before incurring penalties so we can hold on to the cash as long as possible and maximize our cash flow.

Unfortunately, this is not a perfect world and many factors can impact the ability of our assembly lines to hum along at peak efficiency. Companies who enjoy greater success in producing, selling, and delivering products focus on the demand side of the equation. In other words, the more they can understand their customers' needs and meet them, the greater their success. (This is a great place for the Strategic Planner to become involved.) This is in contrast to companies who focus primarily on their suppliers by fighting hard for the best prices, quantities, qualities, and delivery dates.

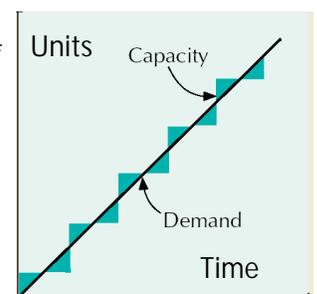
Although it is certainly important to fight for the best prices, etc. from your supplier, it is only through a strong relationship with their customers that a producer can make sure they buy the right kinds of raw materials in the qualities and quantities they need to meet demand. It is surprising but true that many manufacturers have a lot of money tied up in inventory that is either obsolete or just not part of what customers are demanding currently. **They focus on what they have to sell instead of what their customers want to buy.**

Here are three strategies to plan capacity: lead, average, and lagging.

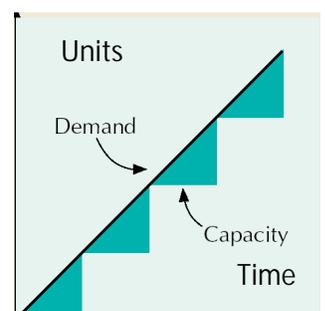
1. Lead capacity strategy – capacity is expanded in anticipation of a growth in demand. This anticipation may result from a marketing plan to lure customers away from another or by entering a market by offering special pricing or quantities. It also helps companies plan for anticipated surges in demand or to provide high levels of customer service during specific periods.



2. Average capacity strategy – we expand capacity to coincide with an average of what we expect knowing there will be times when we cannot meet all the demand as well as time when we have too much capacity for a lowered demand. We expect that about 50% of the time, capacity will lead demand and lag behind it at about 50%, too.



3. Lagging capacity strategy – capacity expands after an increase has been documented. Although customer service suffers initially, it assumes they will be back because there are few (if any) other places where they can obtain this product after our capacity has increased.



Once a capacity strategy is identified, then the extent of the increase is based upon:

- The volume and certainty of anticipated demand
- Strategic objectives in terms of customer service, anticipated growth, and anticipated competition
- The cost of anticipated expansion and operation to meet the company's strategy

How would these various strategies be used in higher education?

Suppose that a state is experiencing a large increase in population which means there will be a demand for higher education in just over a decade. This is how the three different strategies would be applied:



1. An established university that is guaranteed applicants even in lean years may follow a lag strategy
2. A new university may use a lead strategy to capture applicants who cannot get into the established university
3. A community college may use the average strategy because there is little risk when considering its mission to admit all eligible applicants.

Laying Out the Facility

The art (or science depending on how you look at it) of laying out a facility has changed over the years because of changes in:

- Our concepts of how to produce (do we keep extensive inventory on hand because we are supplier driven or small amounts -“just-in-time” - because we are customer focused);
- What to produce (markets have changed in demand and location)
- The constant evolution of technology plus a shrinking, ageing workforce can change our long-term strategy. (A constant concern of Strategic Planners in any organization.)

Some thinking associated with the machinery we will use or tasks we must complete should consider:

- Minimize material-handling costs
 - * Utilize space and labor efficiently
 - * Eliminate bottlenecks
 - * Improve workforce training & development to operate machinery at peak efficiency
 - * Facilitate communication and interaction between all involved
 - * Reduce manufacturing cycle time and customer service time
 - * Eliminate wasted or redundant movement
 - * Increase capacity (produce more, not just do more)
 - * Facilitate entry, exit, and placement of material, products, and people
 - Incorporate safety and security measures
 - Promote product and service quality
 - Encourage proper maintenance activities
 - Provide a visual control of activities and flexibility to adapt to changing conditions
- * Opportunities for a Strategic Planner to apply concepts within this manual to improve work processes within the supply chain if you can gain access. As we get into a little more discussion about layouts, please remember that the more familiar you are with the words and terms involved, the easier it will be for you to interact with everyone associated with the layout planning.

Types of Layouts

We will look at three basic types of layouts. Please remember that capacity planning is not confined to just “making things”, it is also relevant to customer service businesses and retail outlets where customers serve themselves. The three most common examples are:

1. Process (aka ‘functional’) layouts - group similar activities together according to the process or function they perform
2. Product layouts - arrange activities in line according to sequence of operations for a particular product or service
3. Fixed-position layouts - are used for projects in which the product cannot be moved

Process (or Functional) Layouts

This layout groups similar functions together. It may be thousands of different types of items in a do-it-yourself ‘big box’ store, types of clothing in a retail store that makes it easy for clerks or customers to find what they need by visiting different departments or a machine shop may group saws in one place, drills in another, and sanders in a third.

This layout is characteristic of intermittent operations where a wide variety of customers with wide-ranging needs are served. In a process layout, like a machine shop or automotive repair center, the equipment is general purpose and the workers are skilled at operating their machines in their departments or areas.

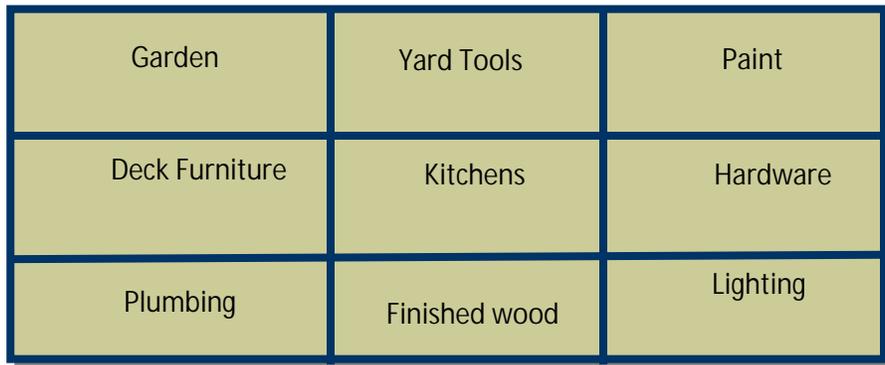
The advantage of this is flexibility and can meet customers’ needs easily and quickly but, since work doesn’t flow smoothly through it and may ‘backup’ from down-line stations, or cross the flow of other work, this is also a disadvantage.



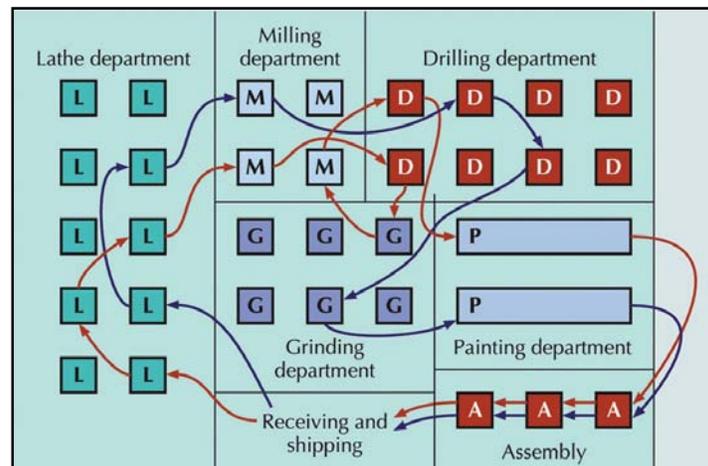
Table 1 - Process Layout Summary

Characteristics	Application to a Process Layout
Description	Functional grouping of activities
Type of Process	Intermittent, job shop, batch production, mainly fabrication
Product	Varied, made to order
Demand	Fluctuating
Volume	Low
Equipment	General Purpose
Workers	Varied skills - some potential for cross-functional working
Inventory	High in-process, low finished goods
Storage Space	Large
Materials Handling	Variable path (forklift)
Aisles	Wide
Scheduling	Dynamic – varies with the demand
Layout Decision	Machine location
Goal	Minimize material handling cost
Advantage	Flexibility

Process Layout for a Retail Business



Process Layout for a Manufacturing Business



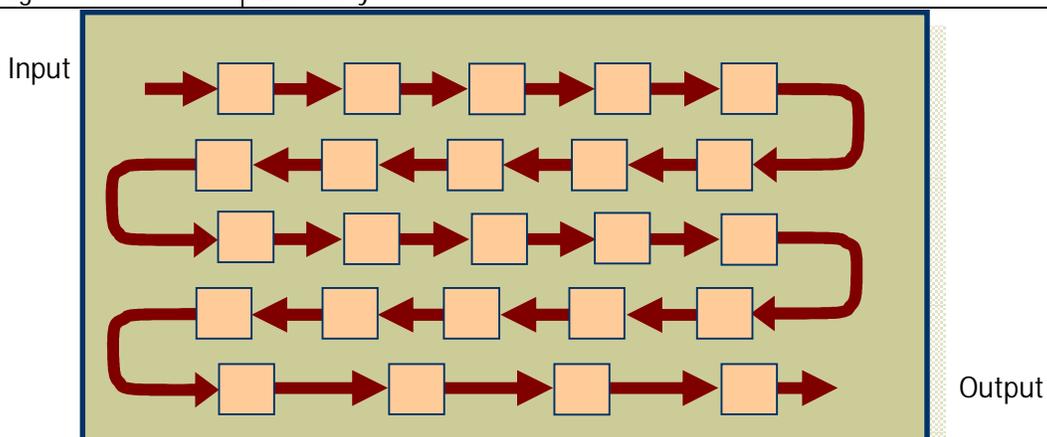
Product Layouts

Product layouts are better known as assembly lines. Henry Ford taught this to American industry when he demonstrated that a line of sequential events with each sub-assembly having its own line was a secret to mass production. (This assumes, of course, that materials flowed into the plant at about the same speed finished cars rolled out the other end.) The flow of work is orderly and efficient moving from one workstation to the next where the technicians wait to perform their specialty – whether welding the car frame or tightening a lug nut on a wheel.

Since the market for these products is very specific, dependable, and stable, it makes economic sense to purchase large, immovable machines performing limited functions. The product made is a standardized one (not like a craftsman's single piece) and the volume is high.

Table 2 Product Layout

Characteristics	Application to a Product Layout
Description	Sequential arrangement of activities
Type of Process	Continuous, mass production, mainly assembly
Product	Standardized – made to stock
Demand	Stable
Volume	High
Equipment	Special Purpose
Workers	Limited skills - no cross functional work potential
Inventory	Low in-process, high finished goods
Storage Space	Small
Materials Handling	Fixed path (conveyor)
Aisles	Narrow
Scheduling	Stable - Varies with balancing and demand
Layout Decision	Line balancing
Goal	Equalize work at each station
Advantage	Efficiency



Fixed Position Layouts

This layout is the only one suitable for its products that cannot be moved until nearly completed. They are too large, bulky, or fragile to be moved such as houses, ships, or airplanes. The highly skilled workers – such as carpenters, plumbers, electricians, and painters – come to the layout. Their specialized equipment, such as cranes, scaffolding, generators, or air compressors for painting, is rented for the project.



Vendor Relations

In your role as an Engineer/Project Manager, you may have worked with a few vendors dealing with HR issues. That contact may have been minimal with you just being the contact person to order materials or you may have had intense contact including contract negotiations.

In your new role as a Strategic Planner, however, you will probably be dealing with ALL of the vendors to some extent and having influence on how the relationships are structured. We frequently use Einstein's definition of insanity when he supposedly said, "the definition of insanity is to continue doing things the way you always have and expecting different results." One of the things to consider doing differently if we want to achieve the 5% profit gain our fictional boss wants is the way we regard vendors.

If you are like the typical client who looks at vendor services as a basic commodity-for-cash transaction, you probably have difficulties with many of your internal and external vendors. "After all," you probably think, "vendors of this product or service are a dime a dozen! I am in the driver's seat. He/she has to make me happy or I'll look somewhere else!"

Would you take that same idea that a vendor is just a basic commodity-for-cash so I do not have to worry about how I treat him/her viewpoint with...

Your doctor?



Your mechanic?



Your lawyer?



Your accountant?

Most people would say something like, "No! They take care of my personal life and would be too hard to replace!"

However, ask yourself if their services-for-money relationships with you are truly different from a vendor at work or have you just never thought of them the same way? If there were a way that you could feel the same about a workplace vendor that you feel about your personal physician, mechanic, lawyer, or accountant, could that possibly:

- Improve the way you deal with the vendor and,
- Possibly improve the service that you get from them?

This is the viewpoint we take with this course: you can improve your vendor's service if you will consider improving the way you view them. **As a Strategic Planner, you can exert a lot of influence in this situation.**

Also consider this: if you beat a vendor down as far as possible and then sign a contract for 24 months (as an example), you are not being a tough negotiator, you're not saving you're company some short-term benefits, YOU'RE GIVING HIM 24 MONTHS, 24/7 PLOTTING TIME, TO GET EVEN (in his mind) ONE WAY OR ANOTHER!

But if you treat him fairly and structure the relationship where his success is tied to your organization's success, then you'll gain a BIG BOOSTER WORKING FOR YOU 24/7! Which would you rather have for the next 24 months?

Strategic Questions in Vendor Selection

Why not consider interviewing potential vendors similar to the same way you would a job applicant? The difference here is you are looking for a partner (not in the legal sense, of course) with whom you can work toward mutual success in the relationship. If they feel you are as interested in their success as you want them to be in yours, this can become a very strong business link.

Here are some questions that can help develop a strategic relationship.

Ask potential vendors to describe their experiences or knowledge by describing past situations such as:

- ✓ When they worked with a client to develop mutually satisfactory methods of dealing with situations that were not covered in their contract (This will help you determine whether they are solution or contract focused. Obviously, the contract should be referenced regarding major issues but how do they see smaller, non-specific issues? Is their first question, "Is this reimbursable?", or is it "How can I help?")
- ✓ Denied a client request while retaining good will with the client (Although clients would always like to hear "Yes" when asking for something not in the original contract scope, they also realize they may not always get it. A vendor who can demonstrate diplomacy while saying "I'm sorry but I cannot because..." will be a better candidate for a successful business relationship than one who just says "No" without an explanation.)
- ✓ Behaviors of the best client they ever worked with and why it was successful. (If they can describe the behaviors instead of personalities, it gives you something to consider adding to your relationship with them.

This reply is about behaviors: "They gave us priorities when it looked like we would not be able to handle events which were not anticipated by either side. This helped us focus on the most important issues first." This is about personalities: "They were a very professional group with whom to work." It tells you nothing about what they did to be seen as 'professional'.)

- ✓ Behaviors of the worst client and why it was not successful (This is the inverse of the previous question. It gives them a chance to draw distinctions between the good and bad and allows the potential client a chance to consider if any of the behaviors mentioned describe how they typically behave with vendors. This would give the potential client a chance to reflect on a truism of organizational behavior: “You can’t do things the way you always have and expect different results!”)
- ✓ Non-traditional methods of evaluating performance by a client (This demonstrates their willingness to consider non-conventional methods and focus on solutions instead of contractual limitations. Once again, we do not mean the contract is not important! It is the foundation for the relationship. However, some solution-focused vendors say, “Since the contract does not say we CAN’T, let’s give it a try!” while obstacle-focused vendors will reply, “Since it doesn’t specify we CAN do it, we will not.” As you can see, both honor the contract but one is more solution-focused than the other is.)
- ✓ The use of “score cards” by each side to provide feedback on their perception of the product, service, or relationship (If the vendor has experience using non-conventional scoring methods, they may be able to offer suggestions that were useful in the past. Their success is tied to your success: therefore, each side has an equal stake in making this work.)
- ✓ Their definition of a “successful” relationship with a client. (This question gives them a chance to suggest diplomatically how to work most effectively with them. They may list things like this:
 - A client who defines expectations but does not micromanage
 - A client who gives us sufficient notice of changes that may impact our ability to deliver our product and services
 - A client who pays on time
 - A client who realizes that our ability to make a fair profit helps us stay in business so we can provide the best to the client
 - A client who meets with us on a peer level as a planner working toward a common view of success instead of a ‘superior-subordinate’ relationship that can erode good feelings quickly)

- ✓ Their most valuable characteristic as a vendor (This is an opportunity for them to brag but not sound arrogant. It gives them a chance to display their self-confidence as a vendor. You do want a vendor who is confident they can provide what you need, don't you?)

In addition, it provides additional traction for the client's expectations. If the vendor says, "We take pride in our ability to meet deadlines," it gives you something to bring up later when a deadline is threatened by saying, "In our initial interview, you said you take great pride in meeting deadlines. With this deadline only 2 days away, will your pride be at risk?"

- ✓ The characteristic they want to improve most as a vendor. (This is a reality check for the vendor and helps the potential client see how the vendor views himself or herself. If the response is something like, "We provide great service but could be better at asking questions to our clients for clarification on some issues. This would reduce a lot time better spent at something else." This is a very realistic reply because every organization, whether client or vendor, could get better at communications. It shows the vendor is realistic and trying to self-improve.

However, if the response is more like, "Nothing, really, because we would not be number one in our field if we were not good at everything", then beware! No organization is so good they cannot get better and you should be very suspicious of any that says so.)

What Vendors Want

Do you think this statement from Zig Ziglar, "When your employees get what they want, you'll get what you want" could be applied to a vendor as well as employees? Why?

A response from vendors ¹ who say they want:

- Respect – The vendors' senior executives want access to their customer counterparts. "If the CIO doesn't want to meet with me, then that's an indication of the value that I'm bringing to the relationship."

(QUESTION: Do you think vendors are reasonable in wanting that? Why?)

- Consistency – Vendors know that some of them are treated as commodities and others as partners and they understand that. However, what they do not want is to be treated one-way one day and the other way the next. That inconsistency causes many problems.

(QUESTION: Do you think vendors are reasonable in wanting that? Why?)

- Guilt-free profit – Vendors need to make a profit, too, if they are to stay in business and support their clients. If deals are only structured to benefit the customer, then do not expect the vendor to invest their best resources in the account.

(QUESTION: Do you think vendors are reasonable in wanting that? Why?)

Are you beginning to appreciate the influence you can bring as a Strategic Planner to the organization & vendor relationship in the future?

¹ CIO Magazine, August 1, 1998 Special Report – For Better or Worse

Complaints about Vendors

In all fairness, there are some legitimate complaints made about vendors.



- They are always selling, never solving
 - It's always about them, never about us
 - They bombard us with much-too-complicated billing and labor intensive account-relationship trivia
 - Once the contract is signed, the relationship changes dramatically
- The highly-qualified consultants that helped close the deal are suddenly unavailable
 - The vendor blames you or your staff for the failure to show progress
 - The vendor bills plenty of hours but actual progress doesn't occur

Take a few minutes to consider each of the statements above and answer these questions about each one:

- Do you think the statements are, for the most part, accurate? Why?
- What may be some common reasons among all of the statements that may explain why vendors act like that?
- Do you think clients do anything to create an environment that would cause problems like those? If so, what do they do?
- What could you do in your role as a Strategic Planner about that?

Once More Time - Start with the Ending First

["You've gotta have a dream](#)

[If you don't have a dream,](#)

[How you gonna have a dream come true?"](#)

-Rogers and Hammerstein's South Pacific



Before you start looking for a vendor for your next outsourcing project, take some time to visualize what you want the relationship with that vendor to look like, act like, feel like, and sound like. As strange as it may seem, those Rogers and Hammerstein lyrics from South Pacific can apply to the business world when considering a relationship with a vendor: if you don't have a dream, how you gonna have a dream come true?

We begin by thinking about a "dream" relationship with a vendor. Collect your project team (or the key people who will have a say in the vendor selection and managing the relationship) and brainstorm these questions. (Remember that in brainstorming there are no value judgments made about responses. Just collect the ideas and evaluate them later.)

What kind of SOLUTIONS (not specific deliverables - do you desire regarding these issues? Hint – a successful relationship with a vendor, a friend, or a spouse involves much more than just the product.)

- Billing statement format and accountability
- Missing deadlines (such as product delivery [vendor] or payment [client])
- Resolving issues not specifically addressed in the contract
- Scope changes made that were not properly authorized first
- Oral, verbal, and written communications between vendor and client
- Replacement of project team members if requested by the "other side" (If the vendor's representative had problems getting along with their client counterpart, how would this be resolved?)
- Educating each side about the other's values, concerns, and aspirations
- What kind of different tasks are you and they involved in if you had a dream relationship with them? (Such as sharing employee development opportunities and costs)

- What kind of reporting would you want from them and what would you be willing to give to them?
- What would motivate the two sides to bind each other together for a period of time legally? AND TO WANT TO DO IT AGAIN WHEN THE FIRST CONTRACT PERIOD EXPIRES!
- Review your thoughts on typical vendor relationships on page 83. How much would you be willing to rethink the way your organization deals with vendors so that your comments were balanced between the client and vendor instead of tipped to favor the client?
- How can you handle scope changes so they do not become a source of contention in the relationship?
- Are the desired products or services from the vendor tactical or strategic? Which is best for your situation? (Are you more concerned with what they can do -strategic- or how they will do it - tactical?)
- What behavioral traits would you want in the ideal vendor representative? What kind do you think they want from the client's representative?
- Southwest Airlines (the only profitable major airline in the US) uses this to guide their hiring - "Hire for Attitude, Train for Skill." How could that same philosophy be useful in selecting a vendor? (Time spent searching for a vendor AND THEIR REPRESENTATIVE who is genuinely focused on providing customer service before haggling over deliverables will provide a stronger, longer relationship. CAUTION – the client must be equally dedicated to the success of the vendor or this becomes too one-sided and will deteriorate.)

Negotiating with Vendors

Although as a strategic planner you may not be leading the negotiations with vendors, you would certainly be in a position to influence how your side approaches them. There are some aspects of negotiating that you should understand.

The popular feel-good phrase usually associated with vendor negotiating is, “We are trying to achieve a “win-win” situation” or something like that. Unfortunately, this attempt to make everyone feel good rather than address the actual negotiation outcomes probably does more to limit potential success in negotiations than it does to help because each side is still thinking about whether they won more regardless of how altruistic they try to sound to the other side.

When you stop to think about it, humans are fundamentally competitive, and there is no real way that two people can say with honesty (notice we do not say ‘sincerity’) “we each won in this situation!” The very definition of winning is that someone emerged from a competition in a more advantageous position than did the others. Even if both sides agree to say, “We each won,” one will still tell themselves (and anyone else who will listen), ‘Yes, but I won MORE than they did!” Winning is a measurable that everyone can understand. Just look at the scoreboard: we scored more than they did!

Satisfaction is what we actually want from a negotiation – not winning. Each side can be satisfied even if they ended up with different outcomes. I may have paid more for it than I had planned to, but you agreed to deliver it sooner than you expected. You got more money and I got it sooner. We both are satisfied.

Winning requires that each side value the same thing: i.e., a greater score in a competitive situation. In the example above, if you said, “I won because you gave me more money than you wanted to,” I could say, “Yes, but I had plenty of money. However, you promised delivery sooner than you wanted to. That means I won!” Obviously, if we do not share the same values, then talking about winning is meaningless.

In reality, the two sides do not always share the same values in the same topics under discussion. Back to the previous example, you valued the money while I valued time. Therefore, we describe negotiation outcomes more in degrees of satisfaction than the either-or concept of winning or losing as we do in

competitive events. The extent of our satisfaction is not so easy to measure because it is an internal factor. Since it is internal, and usually very personal, we do not focus much on analyzing it.

In negotiations, we are rarely dealing with either-or situations. Even when it comes down to the dramatic “take-it-or-leave-it” confrontation, we have still considered many other aspects within the negotiation before we finally take it or leave it.



Think of when we buy a car. Our final decision to take it or leave it results from the extent to which it meets our needs regarding concerns of cost, safety, mileage, passenger capacity, color, audio equipment, comfort options, etc.

Although outwardly the decision appears to be an either-or/take-it-or-leave-it choice, the reality is that we considered all of our needs and thought about how well the car met them. If we are satisfied overall that the car meets our needs, we buy it: even if it is at a higher price than we wanted.

Be Prepared

There is a direct correlation between pre-negotiation knowledge and a successful negotiation outcome! What do you think is meant by a “successful negotiation outcome” to most people? What does a “successful negotiation outcome” mean to you?

Here is what it should mean:

1. It should reach a mutually beneficial agreement
It should meet the legitimate interests of both sides to the extent possible, resolves conflicting interests fairly, will last for some time, and takes into account community [workplace, neighborhood, family] interests.
2. It should be “efficient”
It is able to be implemented with a minimum of “moving parts”, other people or factions, and contingencies on future events.
3. Should improve (or not damage) the relationship between the parties involved

4. It should create an environment in which we would be willing to negotiate with each other again.

This is probably the most important point of the four. It is always easier to spend time developing and maintaining a relationship and keep it going than having to keep restarting with new vendors.

Determining Value

At some point in the negotiation, someone is going to say "value" and from that moment on, there is risk for damage to the relationship unless at least one side (you perhaps?) has a broad understanding of the concept of value.

What or who determines the "value" of an object?

Each side decides for themselves what the value is to them. Remember, both sides may not share the same idea of the object's value or value may not always mean money. We will talk more about this in a few moments.

What or who determines the "price" of something?

Each side decides for themselves what they are willing to pay for something or what they are willing to sell it for. Remember, price may not always mean money. We will talk more about this, too, in a few moments.

Could the value and the price of an object be widely different?

Yes. Suppose you were having a garage sale trying to clear out some of the objects your family has been accumulating for the past 30 years. One of the items is the family piano on which your grandmother taught you to play simple songs. Later, you taught your children to play those songs on the same piano. That old piano has many treasured memories for you. You have a written appraisal stating the value is \$750 and that is on the piano for customers to see.

Two people are looking at it. One is the local antique dealer (you see the sign on his truck in your driveway) and the other is a young mother with a five-year-old child with her.

The antique dealer has been trying to get your price down by pointing out the scratches on its legs (where your puppy once scratched it trying to get your attention when your grandmother was teaching you a song). The young mother is watching her child trying to pick out notes on the keyboard as she tells you they want to get her piano lessons someday but just can't afford the cost of a piano and lessons right now.

Do you think the seller, the antique dealer, and young mother all have the same concept of the piano's price and its value? Who do you think would 'value' the piano more: the antique dealer who is looking for an object to sell for a profit or the young mother looking to find a way to help her child learn about music? Would they value it in the same way? Do you think the price would be the same to both prospective buyers? Do you think part of the price to the young mother may be 'take care of it and let it give your family great memories like it did for ours'? Can you see now why price and value may be different from each perspective?

How would you determine the value of these?

OBJECT	METHOD OF DETERMINING VALUE
A used car for your child who is a new driver.	
A math tutor for your child	
New shoes	
Your free-lance work using a skill you have	
A new TV for your home	
The tricycle your grown child used to ride. You are putting it into a garage sale.	

Were some easier to place a value upon than others? Why?

How can you apply the difficulty you had placing value on these items to placing value on some aspects of negotiations?

Positions vs. Interests



There is a house for sale (by owner) in a neighborhood where you have wanted to live and you are looking to move into that area. Here are two possible scenarios that could occur which will demonstrate the difference between negotiating from positions or from interests.

Positions are the visible facts about the deal such as price, delivery date, quantities, terms and conditions of the sale. Interests are the invisible reasons behind the positions.

If you take time to find out as much as you can about the invisible reasons behind their pricing, delivery dates, quantities, and terms and conditions, you may be able to offer alternative options that will still satisfy them and allow them to be more flexible on their positions.

Negotiation #1

A Focus on POSITION

Your Comments	The Owner's Comments
How many bedrooms and baths?	3 bedrooms and 2 baths
How old is it?	It is 13 years old.
How much are you asking?	\$195,000
We wouldn't want to pay more than \$175,000.	That's your choice but it won't be enough for this house!
Maybe we could go to \$180,000.	I might consider \$190,000.
I wouldn't go higher!	I won't go lower!
At this point it may break off entirely or antagonisms begin to develop because one side starts thinking the other is trying to take advantage of them. The relationship turns into a competition and becomes personal about whether one side can persuade the other to give in.	
The chance of a successful negotiation (see our definition on page 90) becomes very slim.	

Negotiation #2

A Focus on INTERESTS

We shaded the questions used in the previous example. In this one, we are asking questions before getting to the specifics as we try to determine the other side's interest in establishing those specifics.

Your Comments	The Owner's Comments
This looks like a very nice house you have. May I ask why you want to sell?	It has been a great house for us but I have been relocated and we are <u>trying to sell here and get settled there</u> before school starts. (This tells us that time is an important interest to them. We must find a way to help them save time.)
How many bedrooms and baths?	3 bedrooms and 2 baths
How old is it?	It is 13 years old.
How much are you asking?	\$195,000
I'm sure it's worth every bit of that and you'll <u>eventually</u> ("eventually" is a time related word) find a buyer. However, if it were a little less, we would be very interested in it and it may help you <u>get on with getting your family moved and settled before school starts in your new neighborhood.</u>	Well, our <u>interest is more about getting on with our lives than staying here hoping the right buyer shows up.</u> How much less would it have to be for you to be interested?
We wouldn't want to pay more than \$175,000 but we have <u>excellent credit</u> and my lender has <u>already approved us</u> to this amount and assured us it would go through <u>quickly!</u>	That's a lot below what we were thinking. I guess I can come down a little <u>if it closed quickly</u> (another time issue) but I really couldn't go below \$185,000. (With a focus on his interests, his price came down a little.)
Maybe we could get up to \$185,000 if the appraisal supports that much. If it's more, it's still \$185,000 and if it's less, the price will match the appraisal if we agree to buy it. (With a focus on interests, his offer went up a little.)	That sounds fair. It's a deal!

In this example, the buyers have already done their homework by looking at real estate listings in this area to get a feel for the market value of the house. Although the market value and final sales price aren't directly tied together, it will give them a feeling of whether they can afford to be looking in this area. Also, this means they do not have to start with the position (price).

Once they know they can afford it, they talk with a lender to get an approved limit so they can speed the paperwork afterwards in case they find a seller that wants to move quickly.

By asking the seller why he/she wants to sell, they are trying to determine the interests behind the price. If the seller had said, "Our family has grown and we're looking for a smaller house", they may not be as much in a hurry to sell as the family trying to relocate before school starts and be firmer in their pricing.

Mentioning the appraisal introduces an outside, neutral element to the negotiation. (We define neutral

here as something objective which neither side can influence and gains nothing in the outcome of the negotiation. The appraiser gets her flat fee regardless of whether the house sells or at what price.)

If they both agree that an appraiser is a fair judge of value, then that is one less item between them. The more outside, neutral elements you can introduce to a negotiation means there are fewer items for you to disagree over.

Outside neutral elements can be:

- a weather event (we will deliver it Tuesday if it doesn't rain)
- we'll add a cost of living adjustment based on the government's index
- we'll pay the closing price of the stock as of a date (assuming they aren't capable of manipulating stock prices)
- we'll flip a coin ("I flip and you call it")

Since they took time to determine the sellers' interest of getting to their next neighborhood in time for their children to get registered for school, they were able to touch those interests (**words in bold blue**) by making the statements they did. This also gave the seller a graceful way to reduce the price to speed the sale without appearing to be "beaten down" by an aggressive buyer.

The more time spent trying to identify the other person's interests behind the deal will give you more opportunities to present various options that may appeal to the seller.

Here is another situation that should help you understand the different between positions and interests.

You are working with a department manager who had a key project leader go on leave and will be out for the next 8 weeks. The executive sponsor for an important department project just told you that it has changed from a "hold" status (why the former project leader was able to take leave) to "active" and she wants it ready for implementation ASAP. As the strategic planner working with the manager, you two have met a consultant that you believe could do the job and want to call her/him in to negotiate a contract for this project.

This is confidential information known to you and the manager:

You can only spend \$10,000 and do not want to "borrow" against any other accounts or projects you have planned. You have a 6-week deadline on this project. You would like to get it back in 4 weeks in case it needs rework before the deadline. It would be nice to have a reliable resource like this consultant you can count on for unexpected events just like this. It would be good to see how they work on a small project like this before you consider them for larger ones.

The consultant likes the strategic planner (that's you) and the manager. He/she thinks they would enjoy working there. This is the consultant's confidential information:

You normally charge \$20,000 per month and do not have anything else planned for that month. It would be great to "get your foot in the door" with this company but do not want to appear too anxious. You fear that going below your normal rate will set a dangerous precedent that will keep future billings here lower than you would like. It will take about \$11,250 worth of expenses to complete the project and you want to make at least \$8,000 of clear profit.

Negotiation #3

A Focus on POSITIONS

You & Department Manager	Consultant
We have a short term project in your specialty that needs completion in one month. (The project is described to the consultant.) Are you available and how much do you charge?	Yes, I'm available and can do that for you. My monthly rate is \$20,000
We're sorry but \$20,000 is way beyond what we have available? We only have \$9,000. Will you take any less?	I may be able to come down a little but certainly not that far.
The discussion becomes a 'give and take' as each side tugs on that \$20,000 amount. You and the manager are trying to pull it down and the consultant is trying to keep it up without looking like either side is giving in too easily. It seems unlikely you will reach a satisfactory agreement.	
Look back at our warning on page 82 about the dangers of trying to beat a vendor down too far.	

Negotiation #4

A Focus on INTERESTS

Now we'll look at the same situation but ask a few questions to determine their interests behind their positions. Maybe we can approach the negotiation from a different way.

You & Department Manager	Consultant
We have a short term project in your specialty that needs completion in one month. (The project is described to the consultant.) Are you available and how much do you charge?	Yes, I'm available and can do that for you. My monthly rate is \$20,000
We're sorry but \$20,000 is way beyond what we have available? Can you help me understand what all goes into that amount? (The invisible reasons behind the position.)	Well, there will be a significant amount of expenses doing this project in relation to duplication, administrative support, leasing some specialized equipment, and of course, there's the profit I need to stay in business.

<p>We don't want to know what your profit margin is but if there is a way we can provide the duplication and administrative support you need plus allow you to use our equipment, would that reduce your expenses, still allow for your profit, and come within the \$9,000 that I have available?</p>	<p>Yes, let me look at it a little more but I think that will work.</p>
<p>Each side has gained satisfaction in the outcome by taking time to find out the invisible reasons behind the position (price). If they had stayed with the position (price), they may have never gotten off of it.</p> <p>By focusing on interests, a lot of alternative options become apparent and each ends up with what they want.</p>	

How would you define the POSITION in a negotiation?

How would you define the INTEREST in a negotiation?

Which element (position or interest) do you think has the greatest influence on a successful outcome? Why?

INTEREST because there may be many invisible reasons bundled together in determining the price of something (or whatever position you are negotiating). The more that you know about the reasons behind the position means you have that many more chances to find alternative solutions that will be just as satisfactory. If you do not inquire about interests and only focus on position, you will immediately become involved in a 'push-pull' contest with little chance of a successful negotiation.

Which element (position or interest) do you think people focus on primarily in a negotiation? Why?

POSITION because it is visible and does not require the intellectual energy required to inquire about the interests behind the position (price, delivery date, quantities, terms and conditions, etc.) Also, many participants do not realize there is a better way to approach a negotiation.

A Strong Vendor-Client Relationship

Let us take a moment to summarize where we are:

1. We suggest that a vendor is actually no different from an employee of our organization (employees and vendors are paid to perform specific tasks.)
2. The employee/vendor – not the employer/client – determines their level of service within the contract. You may specify a response with 24 hours, but the vendor determines where within that 24 hour gap he arrives.
3. There are some specific techniques that can be used to motivate employees, thus vendors whom we view as employees.
4. We can choose to view vendors like we do professionals in our personal lives.
5. Vendor wants and needs, from a business perspective, are not really much different from ours.
6. We can describe what we would expect in a “dream” relationship with a vendor.
7. We can use that description (# 6 above) as the foundation of our strategy if we are willing to take an unorthodox approach to dealing with vendors.

Never disregard an unorthodox approach to solving a problem. Take a moment to consider the history of 3M “Post-It Notes”

Everyone knows what Post-it notes are: They are those great little self-stick notepapers. Most people have Post-it Notes. Most people use them. Most people love them. However, Post-it Notes were not a planned product.

No one got the idea and then stayed up nights to invent it. A man named Spencer Silver was working in the 3M research laboratories in 1970 trying to find a strong adhesive. Silver developed a new adhesive, but it was even weaker than what 3M already manufactured. It stuck to objects, but could easily be lifted off. It was super weak instead of super strong.

No one knew what to do with the stuff, but Silver did not discard it. Then one Sunday four years later, another 3M scientist named Arthur Fry was singing in his church choir. He used markers to keep his place in the hymnal, but they kept falling out of the book. Remembering Silver's adhesive, Fry used some to coat his markers. Success!

With the weak adhesive, the markers stayed in place, yet lifted off without damaging the pages. 3M began distributing Post-it Notes nationwide in 1980 -- ten years after Silver developed the super weak adhesive. Today they are one of the most popular office products available.

RFIs, RFPs and Teambuilding

This course presents broad guidelines for a new approach to creating a successful relationship with vendors. It is not intended to be a procedural guide for developing RFIs, RFPs, or contracts because there is plenty of information about those topics already in the marketplace.

We believe that Strategic Planners should consider the premise that if you help people clearly understand the “why” of something, they can figure out the “how” that is best for them.

The Request for Information (RFI)

We believe the foundation for a successful relationship with a vendor begins with the Request for Information (RFI), which includes the strategy we describe earlier about treating them like valued associates - not the Pirates of the Caribbean.



The RFI is used traditionally when a potential buyer needs to determine what is available from suppliers who may respond to it. Additionally, buyers can use this to determine whether their expectations are realistic and if solutions exist in the market place. This is also an opportunity for the Strategic Planner to open a dialogue to see if they are interested in changing the traditional arm's-length roles with clients.

Finally, it also gives potentially interested vendors a chance to influence the Request for Proposal (RFP) that follows by pointing out potential problems or unrealistic expectations (as written) that may prevent anyone from bidding later. Vendors responding to the RFI are probably following the old supplier adage, “If you don’t help write the RFI, don’t bother with the RFP!”

The Request for Proposal (RFP)

A RFP can be many things to many people. An IT client seeking a software solution may structure it differently than a government agency looking for a food service provider. Regardless of the nature of the writer’s industry, the common elements of a typical RFP include:

- Allowing a buyer to notify the market of its desire to obtain new technology or services, lay the foundation for the project that will deliver the technology or services, and manage the project itself
- Forcing suppliers to create competitive solutions for the buyer's problems
- Providing a common base of requirements for all bidders thus reducing the potential for claims of unfair competition from losing bidders
- Making it easier for the buyer to understand the differences between bidders

Teambuilding with a Vendor

Our unorthodox approach to developing a successful relationship with a vendor is very much like designing a teambuilding activity. (When you think about it, a client-vendor relationship IS ALL ABOUT TEAMBUILDING!)

When a teambuilding facilitator is asked to develop some teambuilding activities to encourage groups to work together better, some of the first questions asked are, "What will success look like? What are your interests and concerns? How will you know that I've earned my fee?"



Questions like that force the potential client to think in terms of interests, needs and services rather than specific deliverables. In other words, the client becomes more concerned with allowing the expert to provide a solution to their pain and problems than with the deliverables needed to provide it.

Think about this.....

When visiting your dentist for relief of a toothache, are you more concerned about relieving the pain or how it is done and at what cost?



We become less concerned with price when more of our needs and interests are being met.

"If that's true, then why do so many RFPs focus on deliverables?" you ask.



The reasons are simple yet difficult to overcome:

1. The client knows his/her needs better than the vendor and then makes the natural leap to specifying what he/she thinks is the solution for that need.
2. There is a natural distrust of "outsiders" and we do not want to give them any more latitude than necessary for fear of paying too much or being at their mercy.
3. It is how we have always done business with vendors.

Now let us go back and look at those same reasons from a different perspective.

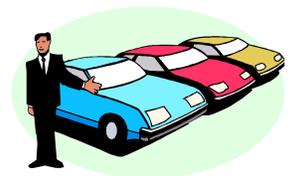
1. The client knows his/her needs better than the vendor ...We agree and do not argue with this part! "...and makes the natural leap to specifying what he/she thinks is the solution for that need."

Here is where we disagree! If the client had a toothache, would he tell the dentist how to provide relief? Of course not! Likewise, if we consider potential vendors to be experts in their fields instead of just commodities-for-cash, then we must allow them to suggest a remedy for our organizational pains. (It is still our choice whether to accept that advice!) This is more radical thinking that Strategic Planners should consider.

We cannot expect them to provide expert advice and help for us while treating them like a necessary evil that we must endure while getting our problem solved.

2. There is a natural distrust of "outsiders" and we do not want to give them any more latitude than necessary for fear of paying too much or being at their mercy.

Here, again, we disagree with the traditional approach to dealing with vendors. Think about buying a car. For many people, this is an activity to be avoided at all costs because we are afraid of paying too much and being at the mercy of the salespersons. However, suppose we prepared ourselves better for the car-buying experience by doing some homework first before we stepped on the car lot. We can take time ahead to:



- Define our interests and needs so we can say “No” when a salesperson tries to lead us down a path that is not best for us.
- Determine what “success” looks like in terms of down payment, monthly payments, interest rates, and options instead of allowing the salesperson to push us.
- Learn more about dealer costs via some ‘Net surfing to give us more options for striking a satisfactory deal.
- Learn how many different manufacturers and models would provide the “transportation solution” we are looking for so we do not feel trapped by any one dealer.
- We gain confidence and power with knowledge of our needs and options. Suddenly, the sales representative is not so intimidating anymore! Why should we not take that same approach with a potential vendor?

However, are we saying that you should NOT focus on deliverables, terms, conditions, and cost but only on your interests? Of course not! But if you focus MORE on defining “the dream” (page 88), sharing that definition with your vendor, and getting your dream satisfied and less on specific deliverables, you have a greater chance of a satisfying relationship with your vendor.

The more satisfying your relationship becomes, the stronger your links to each other’s success and the greater the chance to avoid expensive disputes. **Strengthening vendor relationships would be an incredibly valuable contribution for a Strategic Planner.**

Going to Market

So far, we have talked about production lines and their efficiency, production layouts, capacity planning, production break even points, supply chain management, and dealing with vendors. Now it's time to look outward toward the art and science of getting our products out to our customers.

Although any sizeable company will have a Marketing or Sales Department, it remains a good idea that a Strategic Planner understand a little of their world to make working with them easier. Besides, there is a very strong possibility that you will end up knowing a lot more about their world than they will know about yours!

The American Marketing Association defines marketing as "...the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large. (Approved October 2007)"ⁱ While that's the official definition for the profession, I'm not sure that it helps a Strategic Planner a lot.



Maybe this definition from a major Twentieth Century management guru, Peter Drucker, will be more helpful: "The aim of marketing is to make selling superfluous. The aim of marketing is to know and understand the customer so well that the product or service fits him and SELLS ITSELF (emphasis mine). Ideally, marketing should result in a customer who is ready to buy. All that should be needed then is to make the product or service available."ⁱⁱ Drucker's definition is getting us closer to our starting point.

What can a Strategic Planner do with their high-level view of the organization help to "make the product or service available?" We think there are some very specific steps which can be taken but first, we need to cover a little more background.

This next reference should help you understand where we are going. It's from an article in the Harvard Business Review from 1960 by Theodore Levitt entitled "Marketing Myopia." It was about how businesses looked at themselves and their products traditionally and how they should look at them in the future if they want to survive.

One of his primary examples was the railroads.

The railroads did not stop growing because the need for passenger and freight transportation declined. That grew. The railroads are in trouble today not because that need was filled by others (cars, trucks, airplanes, and even telephones) but because it was not filled by the railroads themselves. **They let others take customers away from them because they assumed themselves to be in the railroad business rather than in the transportation business.** The reason they defined their industry incorrectly was that they were railroad oriented instead of transportation oriented; they were product oriented instead of customer oriented....

The emphasis in that statement is mine because that's the message you have to understand before you begin thinking strategically in relation to your customers. You must make sure the organization realizes that it isn't offering its products to potential customers: **[IT IS SELLING YOUR SOLUTIONS TO THEIR PROBLEMS!](#)**

(This whole course is designed that way! We are not selling a course that we have; we are selling an answer to your question of, "What the heck does a Strategic Planner do?" Our solution/answer is, "Here's a Do It Yourself Manual on How to Become a Strategic Planner." It doesn't get any more market focused than that!)

Here is another example, if you are a civil engineer and a municipality hires you to construct a bridge over a local creek, they do not hire you because you need a project, they hire you because they have a problem that you can solve!



FedEx doesn't sell its delivery capacity, it sells "Business Solutions"

<http://www.fedex.com/us/pckgenvlp/bussol/> .

As we go through this course, we will keep coming back to the basic question of “why would they want to select your products or services and not someone else?” As a Strategic Planner, you need to help Marketing and the Executives come up with a sustainable answer. (I say “sustainable” because it must become embedded in the corporate culture where it becomes ‘this is how we do things’ and endures over time. The Organizational Development is very much in the realm of Strategic Planning. It cannot be the flavor-of-the-month new fad that changes with every new issue of a management magazine.)

Orientations to the Marketplace

There are several different ways to look at the potential marketplace. Which practice does your organization use?

- The Production Concept – This is an age-old view that believes consumers will prefer products (or services) that are widely available and inexpensive as a result of mass production.



“Engineering services are a dime a dozen. I’ll go through the yellow pages and see if I can find one that’s hungry enough to take a low price for our job.”

- The Product Concept – Consumers will favor those products that offer the most quality, performance, or innovative features. The danger here is the producer will become so enamored with his product that he assumes customers will beat a path to their door because of the very nature of the product. (Remember the fallacy of the railroads from the previous section?)

However, if consumers perceive they can get comparable features in another product that is priced lower, they will flock to that. (Stay focused on the customer!)

- The Selling Concept – The idea that consumers, if left alone, will not buy enough of our product (or services) to sustain us: therefore, we must encourage their purchases by selling to them. This is why Coca Cola is so large today. They felt customers wouldn’t buy enough products if left

alone to make their own choice, so they sold the product to them to encourage them to make the correct decision.

This concept is also used to sell products that people may not typically be thinking about such as vinyl siding, insurance, or burial plots.

- The Marketing Concept – This emerged in the early 1960s – coincidentally with Levitt’s article entitled Marketing Myopia – as businesses become more customer centered by thinking, “let’s sell what they want” instead of “let’s sell what we have.” Many studies have shown this to be the most successful approach.ⁱⁱⁱ

The customer-centered approach gradually morphed into relationship marketing where providers of goods and services (you, we hope) realize the value of developing long-term relationships with customers, suppliers, distributors, vendors, and anyone else with whom the seller comes into contact.

There is a key element of success here:

Build an effective network of relationships with key stakeholders (others who gain as you have success) and profits will follow. As a Strategic Planner, you can have a key role in developing and managing these relationships.

Project Performance Issues

A Strategic Planner's relationship to a project isn't necessarily managing it - that's what a project manager (PM) does - but rather taking a detached view of where it is going, how it is going there, the impact on the organization, and a thousand other things that can impact the success of the project.

It means that you will be the PM's best friend at times by running interference and clearing away organizational obstacles. Other times, you will be the devil's advocate asking the PM penetrating questions about the project. But you can't do any of those things without understanding a little more about the functioning of projects. (We are not going to get into project management topics - that's a specific discipline outside the scope of this course.)

Ask yourself these questions: How many projects meet 100% of the performance expectations that were identified during the strategic planning process? Is even hitting 90% realistic or is the number closer to 80%? How about 70%?

An article in the July 2005 issue of the Harvard Business Review, *Turning Great Strategy into Great Performance*, identified many reasons why companies typically only realize a little more than 60% of their strategies' potential value. The opportunity for a Strategic Planner is to use this knowledge as opportunities to find solutions that will serve your company.

Many of the reasons projects do not perform as expected are not readily apparent. So when executives try to fix what they think are the problems, they may inadvertently:

- Exacerbate the problem
- Miss the problem and "search for the guilty" causing career damage to some in an attempt to place blame instead of looking for root causes of problems
- Create a new problem without really fixing the original one
- Waste additional critical resources in their hit-or-miss attempts to fix things
- Damage the project team's morale
- Damage the credibility of the project leaders
- Reduce the likelihood of success for more projects in the future

These are the critical areas of underperformance on which a Strategic Planner can focus. Keep in mind the question, "What conditions, practices, or policies could have led to these outcomes and how can I influence them to change?"

The eleven most common reasons that performance did not match strategy from their research are these:

1. Inadequate or unavailable resources (7.5%)
2. Poorly communicated strategy (5.2%)
3. Actions required to execute not clearly identified (4.5%)
4. Unclear accountabilities for execution (4.1%)
5. Organizational silos and culture blocking execution (3.7%)
6. Inadequate performance monitoring (3.0%)
7. Inadequate consequences or rewards for failure or success (3.0%)
8. Poor senior leadership (2.6%)
9. Uncommitted leadership (1.9%)
10. Unapproved strategy (0.7%)
11. Other obstacles (including inadequate skills and capabilities) (0.7%)

Total = 36.9%

Do you recall reading about any of those topics in this course? If there are large projects going on in your organization, do you think those conditions could exist there, too?

If so, do you think you can do some Strategic Planning based on what you have learned here to make some recommendations for change?

What are you waiting for? It's time to get started!!

A Trip to Abilene

There is one phenomenon associated with groups of people - especially projects - with which you are probably familiar but you may not have a name for it. It's called "Taking a trip to Abilene" and is available as a rental from [CRM Learning](#). It is well worth the time to spend a few hours before the project starts introducing the team to this concept. I have used it several times in project kick-off meetings to make sure everyone speaks up and does not let the team take an expensive, resource-wasting trip to Abilene.

As the Strategic Planner, you can help them avoid a potentially dangerous method of influence. The presence of the Abilene Paradox within a project team meeting is evident when thoughts like these are running through the minds of the participants:

- I'm the newest member of the group and do not feel like I have earned my place at the table yet
- I care a lot about this issue, but I care more about keeping my job. I am going to keep my mouth shut.
- If I express my real opinions on this issue, someone will give me an extra assignment, or put me in charge of finding alternatives. I just cannot handle one more thing on my desk right now.
- The project sponsor has put so much effort into this proposal; I do not want to hurt her feelings.
- It is really up to my boss. That is why they pay him the big bucks.

The Abilene paradox occurs when groups take action that contradicts what the members of the group silently agreed they want or need to do. Management expert Jerry B. Harvey in his article, *The Abilene Paradox and other Meditations on Management*, introduced the Abilene paradox.^{iv}

The name of the phenomenon comes from an anecdote in the article which he uses to explain the paradox. It's about a time he and his wife visited her parents:

On a hot afternoon visiting in Coleman, Texas, the family is comfortably playing dominoes on a porch, until the father-in-law suggests that they take a trip to Abilene [53 miles north] for dinner. The wife says, "Sounds like a great idea."

The husband, despite having reservations because the drive is long and hot, thinks that his preferences must be out-of-step with the group and says, "Sounds good to me. I just hope your mother wants to go." The mother-in-law then says, "Of course I want to go. I haven't been to Abilene in a long time."

The drive is hot, dusty, and long. When they arrive at the cafeteria, the food is as bad as the drive. They arrive back home four hours later, exhausted.

One of them dishonestly says, "It was a great trip, wasn't it?" The mother-in-law says that, actually, she would rather have stayed home, but went along since the other three were so enthusiastic. The husband says, "I wasn't delighted to be doing what we were doing. I only went to satisfy the rest of you." The wife says, "I just went along to keep you happy. I would have had to be crazy to want to go out in the heat like that." The father-in-law then says that he only suggested it because he thought the others might be bored.

The group sits back, perplexed that they together decided to take a trip which none of them wanted. They each would have preferred to sit comfortably, but did not admit to it when they still had time to enjoy the afternoon.

The Least You Need to Know about Budget Proposals

If a strategic planner is involved with shaping the future of the organization, it is reasonable to think they would also have some participation in preparing and presenting budget proposals to achieve the long-range desired outcomes.

Here is the least a strategic planner needs to understand about preparing and presenting budget proposals in support of the changes that need to be made.

Mistakes to Avoid

Five sure-fire ways to make sure your proposal (and credibility) BOMBS are to:

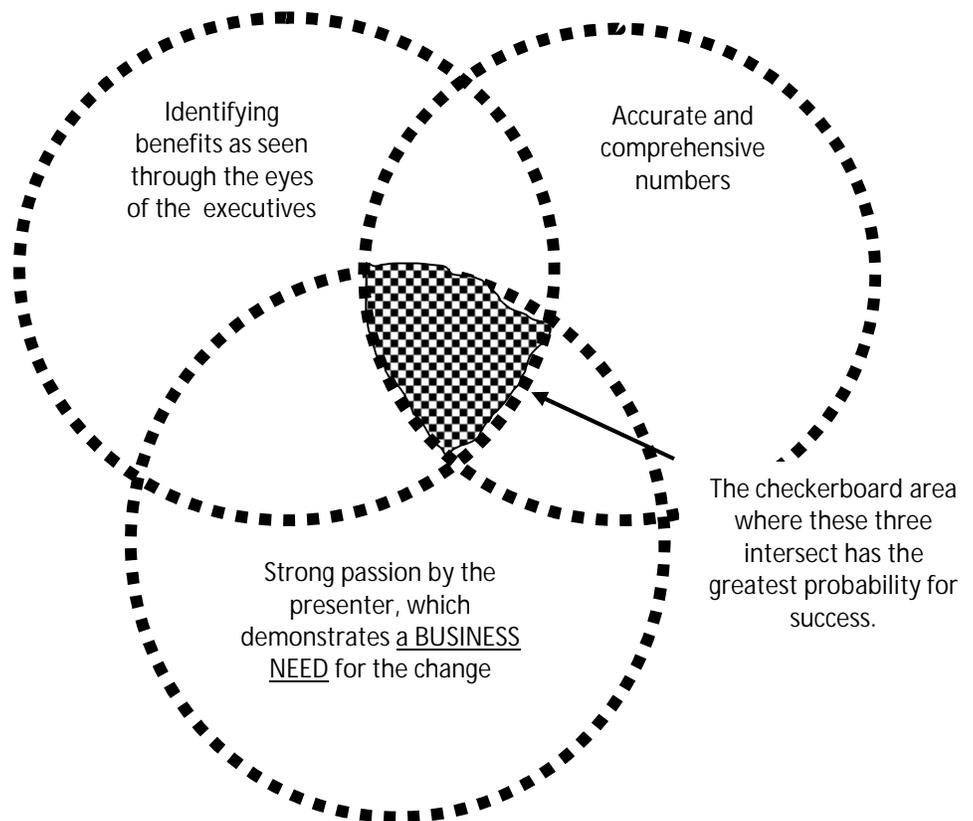
1. Assume the obligation for a “yes” is on the approver and not you! (It is up to you to convince them: not up to them to believe you.)
2. Think that if you get a “NO”, you no longer own the problem that prompted your proposal. (The problem that led to your proposal for a change IS STILL THERE: you still have to deal with it. Do not assume that their ‘No’ means, ‘Well, I tried so now I’m out of it.’)
3. Just drop it off on your boss’ desk assuming he or she will figure out what you want and take it from there.
4. Come up with a great idea, then tell your boss about it (but never document it as a proposal), expect him/her to make it happen, and then complain about lack of management support when nothing happens.
5. Fail to show some “passion” about NEEDING (not “wanting”) it. If it does not excite you, the ‘parent’ of this idea, why should it excite anyone else?



The Three Essentials of a Successful Financial Proposal

A successful financial proposal must contain at least these three essential elements:

1. You must identify benefits as seen through the eyes of the executives. Ask yourself, "What's in it for them to approve this?"
2. You must have accurate and comprehensive numbers including trends and realistic projections using your forecasting skills from page 24.
3. You must demonstrate passion for the business needs that is contagious with the audience of approvers.



Types of Proposals - What You Should Know

Regulatory – REQUIRED CHANGES BY GOVERNMENT

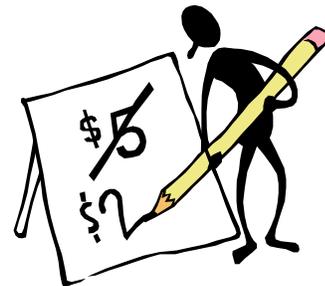
- Not looking for benefits
- Still must identify most cost-effective way to implement (Remember that even if there are penalties for not doing it, you are still accountable.)
- May have time sensitive issues involved
- How are other organizations like us dealing with this?
- Are there any penalties for not doing it?



Non-Regulatory (Business Decision) – CHANGES NOT REQUIRED BUT DESIRED FOR BUSINESS BENEFITS

- Is looking for benefits
- Quantifiable
- “Hard” terms
 - Specific dollars listed
 - Saying “Will result in this...”
- “Soft” terms
 - Estimated dollars listed
 - Saying “Should result in this...”
- Expressed as savings or efficiencies in:
 - Time
 - Production time required to achieve desired result
 - Wage time (salaries or hourly + X% benefits)
 - Postage
 - Consumables (paper, pens, pencils, preprinted forms, etc.)
 - Travel
 - Legal
 - Training
 - Cost of instructor (fees + expenses)
 - Cost of materials

- Cost of lost production while trainees are in class
- Not easily quantifiable but important
 - Prestige
 - Good will
 - Morale
- Types of Business Decisions to make
- Issues to consider
- Equipment related
 - Old vs. Proposed New
 - Operating savings (Spend less money while obtaining current production results)
 - Efficiency (More production while spending current amount of money)
 - Save money AND get higher production
- Reconfiguration issues commonly overlooked
 - “Footprint” of new bigger than of old
 - Rearrange other equipment to accommodate the new
 - Reconfigure wiring (data & power) to support new
 - Reconfigure the work area to accommodate the new
 - Change existing workflow to accommodate new
- Hardware issues commonly overlooked
 - Purchase
 - Discounts for volume
 - Discounts for timing (end of year, etc.)
 - Maintenance agreements
 - Multiple sites discount
 - 24/7 vs. on call differential
 - Training of operators
 - Cost of instructor (fees + expenses)
 - Cost of materials
 - Cost of lost production while employees in training
 - Installation
 - Time required
 - Other machines shut down with production lost



- Effect on existing workflow during installation, testing, and training
- Process related issues commonly overlooked
 - Old vs. Proposed New
 - Operating savings (Spend less money while obtaining current production results)
 - Efficiency (More production while spending the current amount of money)
 - Save money AND get higher production.
 - Reconfiguration workflow issues
 - Rearrange other processes to accommodate the new
 - Retraining requirements
 - New support costs anywhere along the flow.
 - Effect on existing workflow during installation, testing, and training
- Details frequently overlooked
 - Salary (exempt) vs. hourly reduction
 - Does salary (exempt) actually “go away” or is it just transferred to another cost center?
 - Don’t overlook incentive or overtime costs that may go away
 - The cost of benefits is XX??% added to the cost of wages.
- Defining the SCOPE of the finished product
 - Focus on 90 days after completion of the project to account for:
 - Training issues
 - Reconfiguring work space, work flow, or wiring



Your Presentation Strategy

We suggest this as a guideline to help your presentation to the executives be more effective.

Focus on this question: WHAT IS IN IT FOR THE EXECUTIVES? (Why should they act on your proposal?)

You have a greater chance of success with your proposal if you focus on demonstrating how your ideas about issues commonly overlooked will help them:

- Save money
 - By not spending new money (cost savings)
 - By spending less money (cost reduction)
- Save time
- By reducing overtime (cost savings).
- By reducing the time it takes to complete a process (increased productivity).
- By reducing the number of people needed to accomplish something (cost savings).
- By reducing the time needed for rework or error correction (increased productivity).



Naturally, when you help them look good, your reputation improves, too!

Your proposal should use words or phrases to increase their confidence in what you are proposing. These words and phrases are known as “hard references” which carry greater weight in their mind than do “soft” ones. For example, saying, “It will cost exactly \$43,123.87” carries greater weight than saying, “We estimate it should cost about \$43,000.”

Use this model on the next page as a guideline for laying out your presentation until you gain enough experience to plan and speak confidently without it. The key phrases in the sample are explained farther on the page following the sample.

A Model for Your Presentation

This is a successful proposal from a bank's data processing center asking for new software. Use this summary model to make sure you have addressed most of the issues that will probably come up when you present your proposal to executives. Remember, there is no "cook book" that will guarantee success every time. This will help you cover the most likely issues.

EXECUTIVE SUMMARY

(This is the introductory hook that captures the approver's attention.)

We can reduce our Items Processing headcount and meet Fed deadlines earlier with changes in sorter software. We can also achieve a check micro line read rate increase from 48% to 70+%.

(This is the existing situation that you are trying to change with your proposal.)

The amount of checks we present nightly to the Federal Reserve from our three processing centers is determined by two primary factors:

- The amount we can clear, either mechanically via the sorters or manually by clerks keying data.
- The volume of work received.

(The transition connects the hook to the existing situation that you are trying to change.)

Atlanta and Birmingham have old systems with outdated, non-Windows software while Florida is comparatively new complete with industry standard Windows NT software. This older equipment is at its maximum capacity and cannot expand while Florida still can.

(The lead-up data necessary to make a logical request that comes next)

Atlanta and Birmingham consistently have higher labor and maintenance costs per unit volume of work processed than does Orlando. Our labor and sorter maintenance costs will continue to increase with our work volume if we do not act soon to change the present conditions.

We recommend two major changes in our present situation.

1. Upgrade the software in the Birmingham and Atlanta sorters to XXXX that we use in Orlando. It is a proven platform that will allow us to expand our capacities in Birmingham and Atlanta. This will also decrease our non-productive "downtime" as shown in attached comparisons between centers and give us a uniform platform across all three centers.
2. Second, that we install "Speed-read" software in all three centers to increase our sorter "read rate" from an average 48% of checks to over 70%. This will have a dramatic decrease in the amount of manual labor required to process checks plus allow us to meet more Fed deadlines earlier.

We budgeted \$900,000 this year for this project based on vendor estimates. Unanticipated installation wiring code changes in our city require an additional \$85,000. This results in an impact of \$85,000 more than we had budgeted.

(This is your specific request for action.)

We request approval to spend \$900,000 that was budgeted and an additional \$85,000 for the local building code for a total of \$985,000.

(This is how we will pay for it over time.)

We will recover this within 5 years from labor and maintenance savings.

Note: Take a prewritten approval form that the executive(s) can sign on the spot in case everyone says Yes!" You must be ready to "strike while the iron is hot" and not waste the opportunity. You can use this signature to get things moving even if you must wait for a formal signature later.

Here is a review of our recommended structure of the proposal/request.

The "HOOK"

Your "headline phrase" should get the approver's attention and make him/her want to find out more about making this a reality. This can get the approver thinking toward "YES!" before you say the first word!

"We can reduce our Items Processing headcount and meet Fed deadlines earlier with changes in sorter software. We can achieve a CAR read rate increase from 48% to 70+%" will get executives focused on potential savings while you explain the costs associated with buying new technology to achieve those savings."

The "TRANSITION"

The transition phrase gently leads the approver from the highly desirable situation you describe in the hook into the current situation that you want to change.

THE "EXISTING SITUATION"

You should explain briefly and objectively why the current situation requires your proposed improvement. (Try to keep it under 100 words.)

YOUR RECOMMENDED SOLUTION

Clearly, specify **WHAT** you want to do here. Explain the why, how, where, and when in your proposal. Remember that this is just an executive summary.

CAUTION #1: Be sure you can explain clearly, why this recommendation is the best choice in case the approver wants to know why you recommend this particular action and not something else.

CAUTION #2: Also, make sure you have available a list of **YOUR REFERENCES**. Do not provide this unless asked (it may be distracting to your proposal). List the names, titles, and telephone numbers of people (employees or vendors) from whom you collected data or who can offer additional information if needed.

THE BUDGET IMPACT

How much above or below what we had budgeted for this? If we budgeted \$50,000 last fall for this budget year and it only cost \$45,000, the **IMPACT** is +\$5,000 (\$5,000 that we can free to spend elsewhere or save.). If it now costs \$55,000, the impact is -\$5,000 (\$5,000 that we have to take from somewhere else or go over budget.)

WHAT ACTION DO YOU WANT FROM THE EXECUTIVES?

Do you clearly know what decision you want?

TELL THEM HOW IT WILL PAY FOR ITSELF

(Add a spreadsheet here) Make sure it is a one or two line summary. Leave the details in the financial section.

Conclusion

Back in the course overview (page 8) we said, "The short explanation is a strategic planner plans for tomorrow while a traditional Engineer/Project Manager deals with issue of today" and promised, "this do-it-yourself (DIY) manual will help a self-directed generalist who wants to evolve from the day-to-day issues of resolving disputes, conducting investigations, and employee problem solving to eventually becoming a valued participant at "The Table" helping the executive team's plan for the future become a reality."

Do you think we did? Please tell me via <mailto:dg@outsourcetrainingonline.biz>.

We can also act as a resource for you as your organization goes through changes. If you think that would be helpful, please contact us.

ⁱ <http://www.marketingpower.com/AboutAMA/Pages/DefinitionofMarketing.aspx>

ⁱⁱ Peter Drucker, *Management: Tasks, Responsibilities, Practices* (New York: Harper & Row, 1973), pp. 64-65

ⁱⁱⁱ Narver & Slater, *Market Orientation, Customer Value, and Superior Performance*, *Business Horizons*, (March-April 1994), pp. 22-28

^{iv} Harvey, Jerry B. (Summer 1974). "The Abilene Paradox and other Meditations on Management".