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## **INVESTING IN PEOPLE: HOW TO QUANTIFY THE VALUE OF COMPETENCY DEVELOPMENT**

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### ***Abstract***

For all the emphasis placed on competency development, training budgets are almost always the first cut during any kind of down turn. For competency management to become more than a Human Resource Management fad it will have to demonstrate quantified financial return. This abstract outlines one approach to quantify the return on competency development investments.

It's simple, but worth reiterating, that economic value is created when there is a positive net present value (NPV) of an investment's cash flow stream. Keeping track of the net cash flow versus time is the only way to quantify the ultimate value of an investment - a positive NPV means an investment is a winner. The only way to know if a potential investment is likely to be a winner is to reliably predict the investment's NPV. In the petroleum business kinds of managers make all kinds of investments by predicting, with some level of certainty, cash flow versus time. Investments in production facilities, exploration concessions, well re-completions, new computer systems, etc —in fact investments in any real business enterprise—are all normally subject to this kind of scrutiny. Of course the certainty and precision of these investment predictions vary, but they are still subject to the same form of analysis: understanding how business choices affect cash flow.

Investments in competency development should be subjected to a similar type of analysis or they cannot really be considered management. Without such scrutiny such activities cannot be called *competency management*; instead, they would have to be called *competency administration* or maybe even *competency art*. Unless competency management efforts are specifically designed to add value to the organization, they will only succeed through luck.

### ***Building a Competency Management Business Case***

Creating a business case for competency management is similar to creating a business case for anything—with one subtle difference. Creating a business case for a real estate investment a factory, a concession, or a petroleum production facility requires an understanding of how physical assets are likely to impact cash flow. What will the plant cost? How much can it make? What will its production be worth? To make a sound decision about investments in competency management we need to understand how competency impacts cash flow. What will it cost to develop competency? How much better will we perform with skills? What will the improved performance be worth? Basically, to make a sound decision about investments in competency management, we need to build a business case that tests how managing competency development will add to the fundamental value-generating activities of your organization. Very briefly, the four steps below outline how to create a competency development business case.

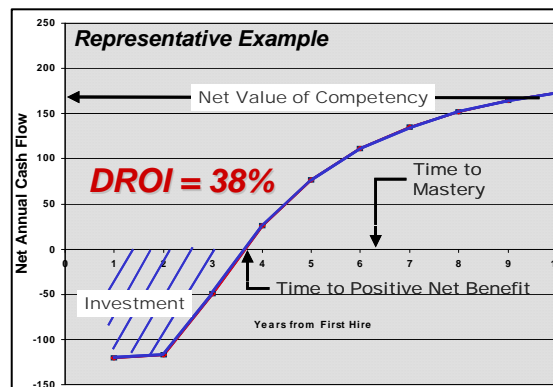
Step 1— Estimate the value of Competency in Key Job Roles

First, each of your organization’s value producing activities estimate the net annual value a competency employee adds to the process. Several different approaches can be used to develop this estimate. One way is to bound the value by quantifying the net cost of replacing the employee with a fully technical qualified consultant (e.g. Suppose for \$1200/day you could hire a top grade reservoir engineering consultant. That would translate to a cost of about \$300k/year. If the employee’s burdened cost was \$120k the net value to the organization would be \$180k/year). A second way is to look at the historical average value of value producing activities and then estimate the percentage of the value an employee contributes (on average) to each iteration of the activity. (e.g. One simplistic example that illustrate the technique: Suppose fully exploration wells have an average risked value to the organization of \$2M, and that developing a prospect requires 5 man-years of qualified geophysics and geologists. The average value of a competent geoscientist is \$400/yr). In any event to manage competency development you must first develop and understanding of the value of competent employees.

Step 2—Quantify As-Is Competency Development Cash Flow Profiles

Second, to quantify how each of these activities yields positive economic return to your organization you will need to be able to plot the *before improvement* cash flow versus time for each core job roles. Each role will have its own typical cash flow profile. The full-cycle economics would follow a similar pattern to the one shown in Figure 1.

If you can estimate how competency affects cash flow, it is relatively simple to value competency development



**Figure 1: Example New Hire Full Cycle Economics**

**Investment.** Burdened salary while employee is ‘coming up to speed’, and the cost to hire, train, and mentor for the average employee.

**Time to Positive Net Benefit.** Time required before the average employee more than covers his cost to the organization.

**Time to Mastery.** Time before the average employee adds significant value to the organization.

**Net Value of Competency.** Total incremental value the average employee adds to the organization after being fully up to speed.

Step 3—Quantify Value of Improved Competency Development

Third, develop an understanding of how improving competency development could increase key activity value. Based on experience or reasoned estimates quantify how improved competency development would likely reduce the investment, shorten cycle time, or produce higher return, of key job roles. Answer the question: “If we focused our

efforts on developing competency in a reliable way, how quickly could we bring employees up to speed? How much would it cost?” Calculate, with reasonable certainty, how knowledge management would improve each activity’s cash flow profile.

Competency development investments should be evaluated using these same full-cycle economic criteria. Investment, time lag, and ultimate value should all be considered. For example, one should consider the impact that their competency development efforts will have on each of the following:

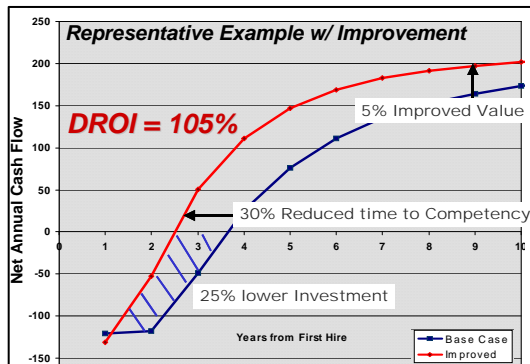
**Investment.** How will an up-to-date online product reduce the cost of new sales associates training?

**Time Lag.** How can explicit definition of competency speed development of the skills and behaviors that add value?

**Positive Return.** How will faster dissemination of the latest technology make wells more productive?

Figure 2 shows an example of a baseline and improved cash flow profile, and how modest improvements in the way competencies are developed can more than triple the Discounted Rate of Return on Investment of training a new hire.

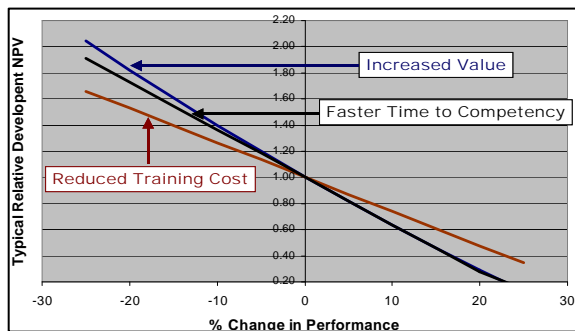
If you can estimate how competency affects cash flow, you can value competency management



**Figure 2: Example Value of improved Competency Development**

The examples show in Figures 1 and 2 are meant to be a representative case. Of course, real situations will be unique for each company and job role. In an attempt to scope the sensitivity of the various factors, Figure 3 presents a ‘spider plot’ of the change in NPV for as the key factors change.

Development costs are important but Value & Time to Competency are even more important



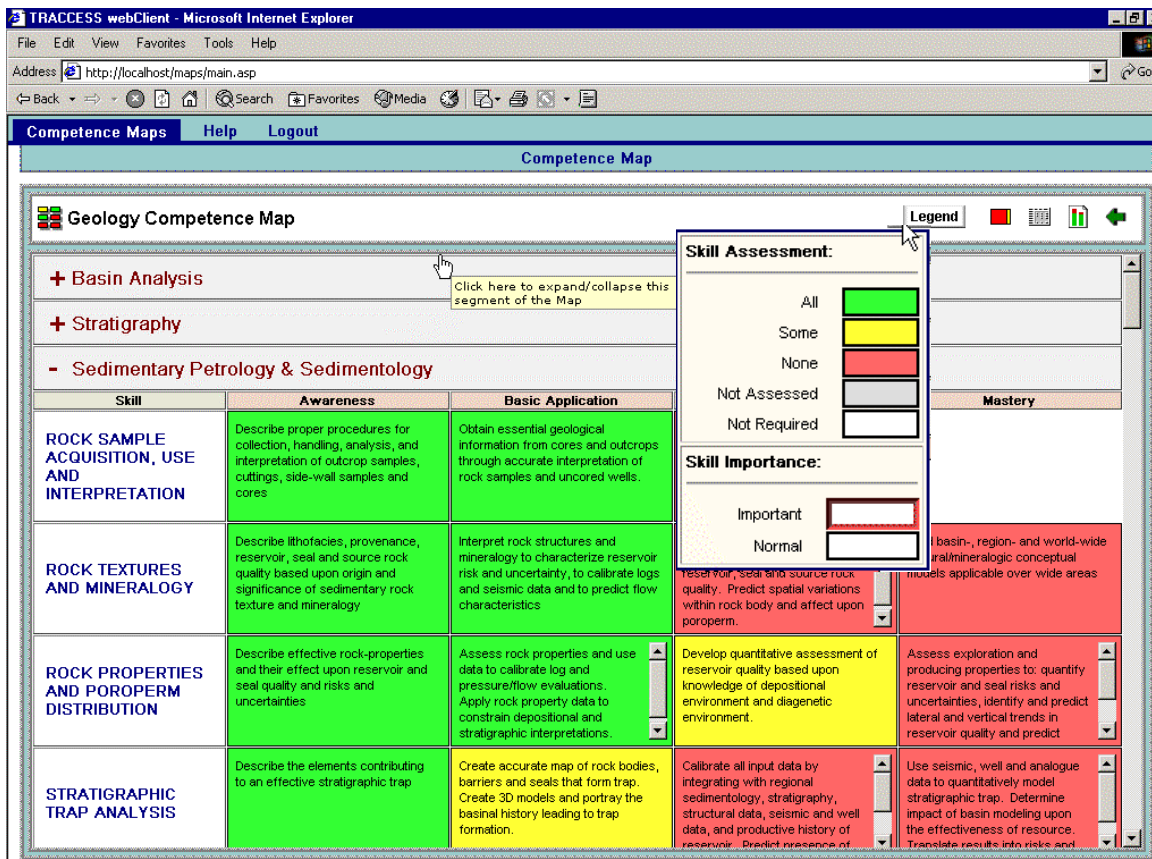
**Figure 3: Spider Plot showing the sensitivity of full cycle economics (NPV) to various factors**

The spider plot show in Figure 3 is specifically for the base case from Figure 2. But the main point in this, and most other examples, is that while the cost of development is an important factor, the ultimate value of the development (e.g. the quality of the training) and the time to competency are even more important factors.

**Step 4 — Implement program targeted at identifying and closing most valuable competency gaps**

With an understanding of current economics, and reasoned estimates of how better competency development could improve the value of core value-producing processes, it is possible to create estimates of the value of improved competency development. If the analysis in Step 3 shows that the value of full competency is most important, then ensure that you've completely defined the set of competencies that deliver that value, and implement a competency management approach to develop those specific skills. If the analysis shows time to competency is most important, then develop an approach to identify and close competency gaps in the least number of calendar days. The point is the analysis approach suggested in steps 1 to 3 above can help focus your efforts on those activities that will truly add value.

While these steps described above are likely tedious, they are not intellectually difficult. Following them is practical, and they will let you value competency management activities.



**Figure 4: One example of Competency Management Approach used inventory individual skills and to identify and close competency gaps**