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MEASURING R&D'S LINKAGE TO CORPORATE STRATEGY: IT CAN BE DONE

Over my twenty five years in industry and consulting across several hundred companies, I have heard countless times about corporate desires to closely link R&D to corporate strategy. But, not one time has any person or any company offered a measure or metric of the degree of linkage that was entirely based on numbers. You have probably had the same experience.

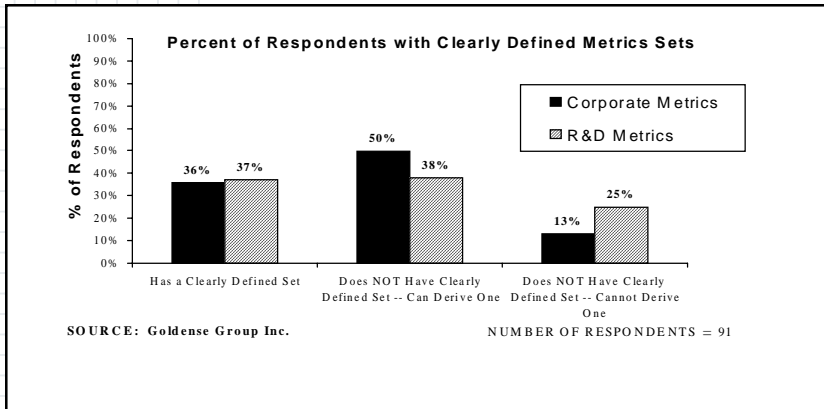
Numerous strategic planning methodologies have offered fairly convincing methods to estimate or calculate the degree of linkage. The “tiered” planning methodologies first develop an overall corporate strategy and then derive the specific functional or business unit strategy from the corporate strategy providing a structure in which a text-based measure can be expressed in a numeric form. The “Hoshin” method and the “Critical Success Factors” method are examples of tiered methodologies. The “Delphi” method is not. There are about 10-15 respected strategic planning methodologies in our society and about half of them are tiered in nature. This is as close as we get to measuring the linkage of any function or business unit to corporate strategy – R&D included.

Certainly this is a complex topic. Certainly there must be several ways to “skin the cat.” One could design several measures to capture the true scope of the subject area – a *set* of measures or metrics. One could design several measures and apply weightings or ratings to each and consolidate them into a single overall metric. One could throw robustness to the wind and go with a single high-level measure, or a single detailed measure, of a specific aspect of strategy and assume that that was representative of the whole.

Or, one could apply the same logic used by the tiered strategic planning methodologies and create an innovative new metric by way of analogy. Take the defined *set of corporate metrics*, in place of the strategic planning methodology. Take the defined *set of R&D metrics*, in place of the functional strategy that supports the corporate strategy. Look at each metric and know the definition of each. Then, count the number of R&D metrics in the corporate set. Eureka, you have a measure of the degree of linkage: “% of R&D Metrics In The Corporate Set.” (Don’t be discouraged if your company has neither a defined corporate set nor a defined R&D set. In fact, about a third of companies have defined sets. If you don’t yet have such sets, this is your first opportunity.)

The relevance of this measure to accurately reflect linkage is disarmingly simple. Business units or functions should receive resources from the corporation in amounts that align with corporate strategy. Companies know and actively manage the percent of revenues spent on R&D, the percent spent on IS, the percent in manufacturing, the percent in sales, etc. These amounts are allocated based on corporate strategy, explicitly and implicitly. Therefore, without taking too big a jump, the percent of metrics present in the corporate set is just as valid a measure as the percent of budget allocated to the function from the corporation.

Comparing the two measures, “% of R&D Metrics In The Corporate Set” and “% Budget For R&D,” provides for some highly stimulating thought and discussion. Aside from the imperfections of each measure, which are substantial, R&D is one of the few functions that can make money and not just save money. One might then expect that R&D might command a disproportionate share of the metrics in the corporate set.

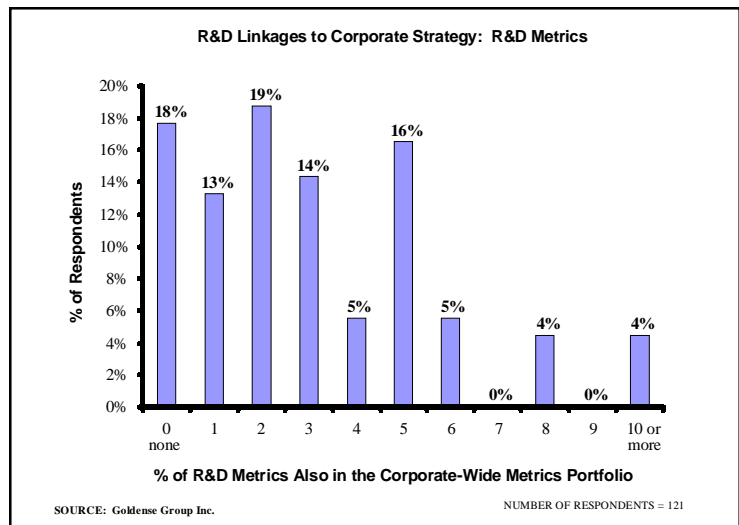


GGI's 2000 R&D Metrics Survey pioneered this new metric and the answers are truly thought provoking. About 120 companies partially responded to the challenge and less could complete the full exercise. Only 36% and 37% of companies had clearly defined sets of corporate and R&D metrics respectively. Another 50% and 38% of respondents, respectively, felt they could derive sets from what was "floating around the company."

Companies with "stated sets" averaged 16

metrics in the corporate set and 6 in the R&D set. Companies with "derived sets" averaged 29 metrics in the corporate set and 13 in the R&D set. We learned that deriving about doubles the set size. When these two populations were combined, the median "% R&D Metrics In The Corporate Set" was 17%. Based on statistical principles, the median was a more accurate representation than the mean.

Like with any measure, one can never capture the full scope with a single representation. On the positive side, a measure with some relevance is useful. If your company spends a great deal on R&D and does not have specific metrics in the corporate set that are also in the R&D set, then it may be time to create linkage between the two. If your company has low spending on R&D but is overly measured in the corporate set, you may also have an opportunity. Using GGI's 2000 results, 17% R&D Metrics In The



Corporate Set (across industries) is comparable to the "% Budget For R&D" which ranges from 1% to 30+% across companies. If one hypothesizes that most industries range from 3% to 8%, then based on the 17% figure, R&D metrics are perhaps over represented in the corporate set. On the other hand, perhaps it is because R&D is one of the few functions that can make money and not just save money. Does R&D really have a greater contribution to corporate strategy? For most companies, the answer is yes. Why then do we manage it like a cost center? P_D

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