THE EVOLUTION OF CORPORATE METRICS: FROM END OF PIPE TO LIFECYCLE IMPACT A UTC EXAMPLE

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Responsible companies have been trying to evaluate their impact on the environment for several decades. Early attempts to assess impact focused on measuring the number of environmental violations. This lagging indicator was inadequate since changes in regulatory priorities impacted results thereby masking operational concerns.

Subsequent metrics focused on the production of US regulated substances, principally hazardous wastes and air releases. This set of metrics did focus organizations on high cost and high profile discharges. UTC has been tracking the hazardous waste discharges and SARA air release for over 10 years. In that period, the discharges were reduced more than 80% in each category. Similar levels of reduction have been reported by other environmental responsible organizations.

These metrics focused on a limited number of potential discharges and do not fully reflect the environmental footprint of a manufacturing operation. To account for these broader impacts, UTC instituted environmental metrics that include all waste produced during the manufacturing process. The baseline, first collected in 1999, includes recycled and nonrecycled waste categories. Materials tracked include scrap metal, packaging materials and manufacturing process materials such as used coolants and acids from the plating process.

The expanded waste definition was deployed worldwide and has identified new opportunities for the organization to further streamline processes. An ongoing concern is the changing business portfolio resulting from acquisition and divestiture of various operations. To account for these changes, UTC now normalizes goals using corporate sales. The use of the normalizer allows for a fairer evaluation of operations regardless of growth or contraction.

The new challenge is to evaluate the potential lifecycle impact of the corporation's products. For diversified operations like UTC the challenge is even greater because the metrics must cross varied product lines. Many environmentally important facets of products are already valued in the marketplace. Energy efficiency, low noise levels and reliability are key product requirements that have environmental attributes. Because these are already tracked during the design of products, no additional environmental metrics are assigned to these factors.

However the environmental impact of material choices is not consistently recognized during the design process. UTC has developed goals to limit the use of five materials in the design and manufacture of all new products. The goals will require assessment of material choices to reduce the environmental footprint throughout our value chain. By adding these product goals to our suite of operational metrics, UTC will promote environmental performance of its broad-base businesses.