

the "Value Scorecard" (Figure 2.3-1 and discussed below). In order to scope and focus the initial implementation, a subset of the Air Force S&T 6.3 programs were selected as pilots. A total of thirteen programs, selected from across the complete S&T spectrum, are

included in the initial experiment. The IPTs associated with each of these programs have helped develop the just-in-time education and training discussed below.

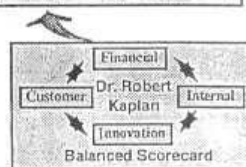


Figure 2.3-1 -The Value Scorecard

TI Six Sigma Scorecard																	
6.3 S&T Tech. Options		Performance Variations (MPU)			Productivity Variability (DPU)			Support Index			Cost Est./Variability			Cust/ Risk Index	Other Risk Factors	Time to 1st Prod. (Mo)	Tech Risk Index
A	B	C	Parts	Proc	Complx	S&T	Trans	Prod	Dept	O&S	S&T	Trans	Prod				
1																	
2																	
3																	
...																	
Baseline																	

Objectives:

- Cause S&T IPTs to consider process as well as product issues during technology development
- Evaluate overall Value by considering the effects of variability of performance, producibility, supportability, cost and risk during 6.3 development



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The Value Scorecard (figure 2.3-1) has been developed and applied to each of the 13 pilot programs. The value scorecard was derived from the merging of two concepts: 1)The Texas Instruments Six Sigma Scorecard (Ref. 3), and, 2)Dr. Robert Kaplan's (Ref. 4) approach to metrics encompassing the four factors shown on the lower right of figure 2.3-1 (instead of a general Return on Investment). From left to right on figure 2.3-1, the scorecard allows a comparison of each design alternative in terms of the expected variation in performance, producibility, supportability, and cost and risk. The "language of defects" (the probability of encountering a defect) is used to depict the variability and is common across the scorecard.

Major benefits expected from use of the Value Scorecard are: 1)that it will enable the technology developer to present a balanced

view of each technology alternative, 2) to identify risk earlier and thereby budget for resolving those risk factors, and finally 3) that it will present to the customer a more comprehensive understanding of the potential cost and risk associated with different technology alternatives that address the spectrum of customer requirements.

2.4 Education and Training

A course was developed using a philosophy of "Do by Learning and Learn-by-Doing" and applying Just-in-Time education and training to individual teams wishing to implement affordability on their specific project. In other words, the team (both Govt and Industry team members) had an immediate need for the training in their project. The overview course focused on identifying critical pieces of IPPD and integrating the results through a Value