

8.6 Significance of DTC for development cost by DTCN methodology

8.6.1 Current status of DTC for development cost in the United States (as of 1991)

8.6.2 Current status of DTC for development cost in Japan

8.6.3 Significance of DTC for development cost by DTCN methodology in this book

8.6.1 Current status of DTC for development costs in the United States (as of 1991)

DTC generally refers to DTC for mass production costs in the United States. Therefore, no decisive method to implement DTC for development costs that occur only once has been established. The United States Government Accounting Office (GAO) blamed NASA for its failure to establish and implement DTC for development costs in 1989 in spite of NASA's promise to do so in 1985.

In a discussion in 1991 at NASA's Station in Virginia, between the person in charge of DTC at NASA and the author about the ideas of this book, it was suggested that the failure may have resulted from the preconception that the motivation to reduce costs after contracts on new projects can not be obtained without a monetary incentive, and that there is a lack of understanding of how to properly use the "In order to do what?" "How to do?" and "Why" questions in Chapter 1 of this book.

The person at NASA commented that it would take considerable work and time (5 to 10 years) to get people in general to understand and implement the concept of the procedure for DTC for development costs, which is the original plan of this book.

In this setting, no proper DTC has been implemented for the development costs of the US space station. At the time of the discussion, there was a possibility that the budget for the space station would be reduced for several reasons, including the failure to establish DTC for development costs.

8.6.2 Current status of DTC for development costs in Japan (as of 1991)

When the official application of DTC for mass production costs was adopted in 1985, the need to establish DTC for development costs was identified by several organizations, including the National Space Development Agency. The trial of DTC for development costs in the Japanese part of the space station was started on the basis of the NASDA-STD-4 "Design-To-Cost

Implementation Standard" (July, 1985) to which the author contributed.

However, the potential of DTC for development costs has not been fully realized because the instructions to clarify the contents of the work of each stage of DTC for development costs, as well as the instructions for the contract system, unexpected cost management method, and detailed preparation of the activity PMD indicating the purpose and measures relationship until the end of the development, have not been properly established. Therefore, the contents of this book were prepared as a draft proposal, in 1991.

8.6.3 Significance of DTC for development cost by DTCN methodology in this book

The following points show the significance of the "DTC for development costs by DTCN methodology" in this book:

- (1) It clarifies the following issues to be solved in terms of DTC for development costs in Japan.
 - i) Way of thinking and management method for unexpected costs
 - ii) Visualization of the activity cost to achieve a target using a development activity PMD with pictures (Table 8.2-5)
 - iii) Separation of the stages of the steplist for DTC for development costs (Table 8.2-2)
 - iv) How to prepare a cost status report for DTC for development costs (Table 8.4-1)
 - v) Unexpected cost classification and management method in implementing development costs (draft) (Section 8.5.1)

- (2) It clarifies the following issues to start DTC for development costs in the United States:
 - i) Training and establishment of PMD techniques in order to implement DTC for development costs in the United States
 - ii) Translation of this book into English

Solving the above issues will encourage the practise of DTC for development costs in the United States and other country.

DTC for development costs will be fully implemented when such training has been given to all government officials and the DTCN methodology has been established among them.

The author hopes that DTC for development costs will be fully implemented in 3 to 4 years.

<References>

[1] United States General Accounting Office; Report to the Chairman, Committee on Science, Space and Technology, House of Representatives "Space Station, NASA Effort to Establish a Design-To-Cost Lifecycle Costs Process." GAO/NSIAD-88-147 (May 1988)