C. Implementation of CIM

I. Methods of Developing a CIM Strategy

Establishing uniform process chains with their accompanying data flows and short term control possibilities gives rise to great rationalization potential. This explains the substantial user-acceptance of CIM principles. What can a user do, however, when CIM is widely discussed, but not (yet) available in the form of complete CIM systems?

1. Wait until CIM hardware and software is available for full implementation.
2. Proceed with partial solutions and hope that, when CIM is fully available, these partial solutions can be integrated.
3. Make fundamental decisions relating to PPC, CAD and CAM such that they will be in line with the future CIM set-up, but otherwise proceed with partial solutions.
4. Actively pursue all the present opportunities for implementing CIM.

The first two options have the advantage that they need not involve "learning from one's mistakes" in the difficult task of CIM development, but have the disadvantages of the risk of loss of "know-how" in a future-oriented area, and dependence on the development strategies of producers of CIM systems.

The last two options require, to a greater or lesser extent, an overall concept. The development of such a concept certainly demands considerable effort, but clarifies the enterprise's position with respect to CIM and shows the direction in which the entire enterprise structure should develop.

Strictly speaking, a CIM strategy should embrace the entire future concept of the concern, beginning with the question of location, operational structure, organizational structure, the production program to be undertaken, the extent of standardization, the layout of the factories, down to manufacturing techniques and the associated information system. Hence CIM becomes a part of strategic planning. Consequently a CIM strategy is associated with top-down planning, as shown in Fig. C.1-1.

An important consideration is the early persuasion of middle management. It is evident that these employees feel particularly threatened by the introduction of sophisticated new technology. Coordination functions, previously taken care of by these employees, will disappear in the process of tightening up organizational processes. On the other hand supervisory personnel will experience job enrichment as a result of reintegration effects.
1. Persuasion of top management

2. Actual analysis / weak points

3. Rough planning outline

4. Persuasion of middle management

5. Detailed planning: collaboration between middle management and specialists

6. Conversion / implementation

7. Monitoring and further development

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approx. 150 - 250 working days, if necessary with the help of external specialists

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Fig. C.I-1: CIM strategy

Even when this is not explicitly stated, middle management tends to have a fine sensitivity to such possibilities, and to experience them as a threat. It is, therefore, essential that new functions for this management level should be defined at an early stage in terms of increased planning, control and development responsibilities.

Along with top-down planning, a bottom-up strategy is also necessary. A CIM system only has any chance of success if it is accepted by the specialized departments. For this reason, constant switching between bottom-up and top-down approaches is needed in the strategy development process: critical factors must be fully discussed before incorporation - otherwise, the ill-prepared presentation of a strategy proposal can lead to blocking of its acceptance.

A CIM strategy demands considerable organizational knowledge of informational interdependence and operations within the industrial enterprise. Furthermore, familiarity with hardware and software developments in information technology is essential. For these