Toward the Factory of the Future
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AN ORGANIZATIONAL STRUCTURE FOR PRODUCTIVITY IMPROVEMENT

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INTRODUCTION
Productivity improvement is achieved in any of three ways:
* through capital investment
* through technological innovation, and in
* more effective use of human resources.
Apart from fully automated systems which virtually eliminate the human resource element, all three aspects must be addressed in order to fully realise an organization's productivity improvement potential. Which of these three contribute more to productivity improvement can be left to productivity experts to decide - suffice it to say that fully exploiting human resources enables capital investment and technological innovation to be fully exploited also.

Improving productivity through more effective use of human resources is inextricably linked with motivation theory. A three-way classification of motivational approaches is shown below (references to each item can be found in [1]):

<table>
<thead>
<tr>
<th>Extrinsic</th>
<th>Intrinsic</th>
<th>Combined</th>
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<tbody>
<tr>
<td>Piece-work</td>
<td>Human Rel.</td>
<td>* Scanlon</td>
</tr>
<tr>
<td>Profit Sh'g</td>
<td>Maslow</td>
<td>* Work Simpl.</td>
</tr>
<tr>
<td>Std Hour</td>
<td>McGregor</td>
<td>* Rucker</td>
</tr>
<tr>
<td>MDW</td>
<td>Hertzberg</td>
<td>* VE/VA</td>
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<tr>
<td>Improshare</td>
<td>Job Design</td>
<td>* QC Circles</td>
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<td></td>
<td>Socio-Tech.</td>
<td>* Quality C's.</td>
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<td></td>
<td>QWL</td>
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Historically, the extrinsic and intrinsic approaches have virtually followed mutually exclusive paths. Only in the third list do we find the two methods merging to a greater or lesser extent. The underlying theme in all items in the third list is 'employee involvement' and it is here that we find the biggest potential for productivity improvement. Using employee involvement implies that people are creative and that given the opportunity, employees could significantly contribute towards raising productivity in the organization while improving their own QWL at the same time.

This paper deals with an organizational improvement system called SHRED COST (Sharing Reductions in Cost) which combines both employee involvement and gainsharing reward plans [2]. Only the organizational improvement structure will be covered in this paper.

ORGANIZATIONAL STRUCTURE FOR IMPROVEMENT
Given the almost half century experience in involvement activities, one might suspect that the opportunity for improving these must be limited. While this is basically true, the same cannot be said of the organizational environment in which the involvement teams operate. Most programs (Rucker work simp., VE/VA, etc.) are very much local affairs with little integration with the rest of the plant since they are designed to meet a specific need. Many Quality Circle promoters fall into this category since their efforts are directed more to the teams and their activities rather than on creating the best environment in which these could flourish. Only the Scanlon Plan [3] formulates a procedure for totally integrating the involvement process in the organization - though, the coverage and depth of these functions could be improved.

The formal structure through the SHRED COST improvement process operates as illustrated in Fig.1. For most organizations, the full structure consists of a Steering Council and three types of formal teams - the Coordinating Committees, Action Teams and the WIT (Work Improvement Teams) Teams. Numerous short-lived ECGs (Employee Consultative Groups) operating informally within each department, provide the lowest level of involvement in the organization, and from time to time, are expected to involve every employee in each department.

Referring to Fig.1, we move from the ECGs to the
WIT Team which is composed of a number of employees coming from the same department with the supervisor always taking the role of leader. The Coordinating Committee (CC) operates at the organizational level of the manufacturing manager and his subordinates. When the need arises, the CC sets up Action Teams comprised of staff personnel whose tasks are to tackle specifically defined but broader based problems. The Steering Council determines the operation of SHRED COST and monitors its overall performance. It includes the factory manager, the division or functional managers, and representatives of the trade unions if the plant is unionised. The Facilitator helps train, launch, operate and monitor the WIT Team meetings while the Coordinator (or, Productivity Manager) oversees the smooth functioning of the SHRED COST program.

Organizations in the order of 300 employees or less could get by with the structure contained within the broken framework, with the CC even handling the functions of the Steering Council. The Facilitator and Coordinator functions can be combined, and for plants of upto 100 employees, this position could be a part-time appointment.

The major objectives of the SHRED COST program can be concisely expressed in two statements:
* To improve the QWL of the company’s employees
* To improve the company’s competitiveness.
The first addresses the intrinsic elements discussed earlier whereas the second is directly concerned with the improvements themselves.

The structure and functioning of each of the elements in Fig.1 are now considered.

THE WIT TEAMS AND ECGs
The WIT Team is comprised of between 8 to 10 employees coming from the same department with