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# **INTEGRATING HUMAN ASPECTS IN PRODUCTION MANAGEMENT**

## IFIP – The International Conference for Information Processing

IFIP is a non-governmental, non-profit umbrella organization for national societies working in the field of information processing. It was established in 1960 under the auspices of UNESCO as an aftermath of the first World Computer Congress held in Paris in 1959. Today, IFIP has several types of Members and maintains friendly connections to specialized agencies of the UN system and non-governmental organizations. Technical work, which is the heart of IFIP's activity, is managed by a series of Technical Committees.

IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of Information Technology for the benefit of all people. Its principal elements include:

1. To stimulate, encourage and participate in research, development and application of Information Technology (IT) and to foster international co-operation in these activities.
2. To provide a meeting place where national IT Societies can discuss and plan courses of action on issues in our field which are of international significance and thereby to forge increasingly strong links between them and with IFIP.
3. To promote international co-operation directly and through national IT Societies in a free environment between individuals, national and international governmental bodies and kindred scientific and professional organizations.
4. To pay special attention to the needs of developing countries and to assist them in appropriate ways to secure the optimum benefit from the application of IT.
5. To promote professionalism, incorporating high standards of ethics and conduct, among all IT practitioners.
6. To provide a forum for assessing the social consequences of IT applications; to campaign for the safe and beneficial development and use of IT and the protection of people from abuse through its improper application.
7. To foster and facilitate co-operation between academics, the IT industry and governmental bodies and to seek to represent the interest of users.
8. To provide a vehicle for work on the international aspects of IT development and application including the necessary preparatory work for the generation of international standards.
9. To contribute to the formulation of the education and training needed by IT practitioners, users and the public at large.

IFIP's principal aims were and are to foster international cooperation, to stimulate research, development and applications and to encourage education and the dissemination and exchange of information on all aspects of computing and communication. IFIP's creation was well timed. In the 1960s there began a veritable explosion in the growth of the computer industry and in the application of its products. Within the life-span of IFIP information technology (as it is widely known today) has become a potent instrument affecting people in everything from their education and work to their leisure and in their homes. It is a powerful tool in science and engineering, in commerce and industry, in education and administration and in entertainment.

Further information on IFIP can be found at the following URL: <http://www.ifip.or.at/>

# INTEGRATING HUMAN ASPECTS IN PRODUCTION MANAGEMENT

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## *Preface*

In recent years the situation of production enterprises has been aggravated by the change from a vendors' market to a buyers' market, the globalisation of competition, a severe market segmentation and rapid progress in product and process technologies. Beside cost and quality, time has taken on an increasingly important role, forcing enterprises to become ever more dynamic and versatile. Therefore, in all areas of production management, novel, effective concepts, procedures and tools have been developed in order to meet these new requirements.

But beyond these more technical, organisational and information technology related aspects there is certainly another one which has to be considered more closely than ever before, namely that of human resources. Is not group technology also related to group work? Do partners in a global network only operate according to predefined process schemes with no personal contact? Are the mental process models of the programmers of ERP-systems the same as those of the users? What is the impact of human behaviour and what consequences are to be expected if organisational and individual objectives are separated? And finally, how do necessary technological changes affect the workforce and the individual needs and wishes of the employees.

As a consequence, production management should consider human aspects in greater detail for a better understanding of its double role within production management: Humans are not only regarded as managed resources, as they are looked upon from a traditional perspective. They are also managing resources, not only on the executive level of an enterprise, but in many cases also on the shop floor level, as demonstrated by many examples of continuous improvement teams in industry.

This book brings together the opinions of a number of leading experts, analysts, academics, researchers, vendors and industrial practitioners from around the world who have been engaged extensively in integrating human aspects in production management. Through individual chapters in this book, authors put forward their views, approaches and new tools. Still, other authors present a glimpse of the nature of solutions that may be developed in the near future.

This book is loosely structured to allow chapters which address common themes to be grouped together. In these chapters, the reader will learn key issues which are currently being addressed in production management research and practice throughout the world. In short, this book presents some of the latest thinking and solutions for integrating human aspects into industrial practice. The book is composed of six parts, each focusing on a specific theme:

- Human Resource Planning,
- Human Aspects in the Digital Factory,
- Human Aspects in Production Planning & Control,
- Knowledge Management,



- Management of Distributed Work, and
- Service Engineering.

The oral versions of the included papers were presented at the International Working Conference "*Human Aspects in Production Management*", held in Karlsruhe, Germany, on 5<sup>th</sup> through 9<sup>th</sup> October 2003. Following this conference, the papers have been extended by the authors and passed a peer review process. The conference was supported by the International Federation of Information Processing (IFIP) and was organised by its Working Group 5.7 "Integration in Production Management". The conference was hosted by the ifab-Institute of Human and Industrial Engineering of the University of Karlsruhe.

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