Business Benefits from Enterprise Integration
Workshop 5, Working Group 1

R.H. Weston¹ (Ed.), E. delaHostria², K. Kosanke³, E.R. Noxon⁴

¹ MSI Research Institute, Loughborough University, Loughborough, Leicestershire, LE11 3TU.
² UK Rockwell Automation, Allen Bradley Co. Inc., 1 Allen-Bradley Drive, Mayfield Heights, OH 44124-6118, USA.
³ CIMOSA Association e.V. Stockholmer Str. 7, D-71034 Böblingen, Germany.
⁴ CAM-I, 3301 Airport Frwy., Suite 324, Bedford, Texas 76021, USA.

Abstract. The paper presents the results of Working Group 1 of ICEIMT'97 Workshop 5 dealing with benefits of enterprise integration with focus on human teaming in process chains which extend over organisation boundaries. The paper is concluded by a proposal for a research project on improved enterprise cohesion through teaming.

Keywords. Enterprise Integration, Process Organisations, Teaming, Virtual Enterprises

1 The Working Group

Collectively members of the sub-group could represent business and technical end user, vendor, consultancy, systems integrator, researcher and standards making perspectives on enterprise integration requirements.

1.1 Group Objectives

This working group focused discussion on:
1. means by which the benefits of enterprise integration can be expressed in business terms, and
2. how business drivers can be related to different forms (types and classes) of enterprise integration.

2 Need to Link Business Drivers and Enterprise Integration Requirements

In the absence of a common understanding of business, social and technical problem perspectives, normally there is a disconnect between the conceptualisation of business opportunities and the specification, realisation and development
of enterprise systems. This disconnect occurs whether such systems are human, techno centred or both. Invariably the result has been the piecemeal implementation and deployment of largely autonomous and isolated human and IT systems in which (a) the degree of alignment between business goals and values and the operation of systems is essentially unknown, and (b) investment in new systems and systems which integrate other systems is difficult to cost justify and may prove costly and ineffective.

New and improved approaches to enterprise engineering, based on modelling and integration have become available. However, industrial penetration has been very limited. This situation can be attributed largely to the lack of a generalised way of quantifying the business benefits of enterprise cohesion. With regard to the industrial deployment of computer infrastructures (on which integration technology can build) the situation is somewhat brighter. Even so the use of computer networks and information systems is normally justified on a fuzzy basis, i.e. having assumed that productivity improvement will ensue from a general improvement in the availability and reuse of information. Unfortunately this form of justification may generate the perception that computer networks and information systems are necessary infrastructural evils (i.e. incur an overhead on the enterprise) rather than directly facilitating new business opportunities from improved cohesion.

Thus there is clear evidence that more ambitious investment in enterprise cohesion is discouraged by the lack of an analytic basis for justifying the business benefits of integration.

3 The Unitary Organism Paradigm and the Concept of a Process Stream

Reference was made to a so-called “unitary organism”, i.e. the case of a single person (or organism) performing all enterprise functions was used as a benchmark. Such an enterprise was assumed to be integrated to a high degree. This led to the notion of a “process stream”, encompassing a set of sub-processes (which collectively function to realise the process) to which values, expertise, events and resources can be assigned to realise the type of product and services required1. This concept was further developed by considering a common requirement to deliver “product applications” to customers, i.e. for the “enterprise” to recognise the purpose(s) to which a product (or service) would be put by each customer; and thereby to deliver (a) better quality products and (b) to assess the impact of likely changes required during the product (or service) life-time. Potentially such changes would impact directly on the optimum decomposition of a process stream and the way in which the sub-processes should be reintegrated together to realise the process. For example a requirement to support certain classes of change would

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1 A process stream may need to be designed and configured to support some suitable product decomposition, e.g. so that sub-products may be made by different actors working concurrently, sequentially or both.