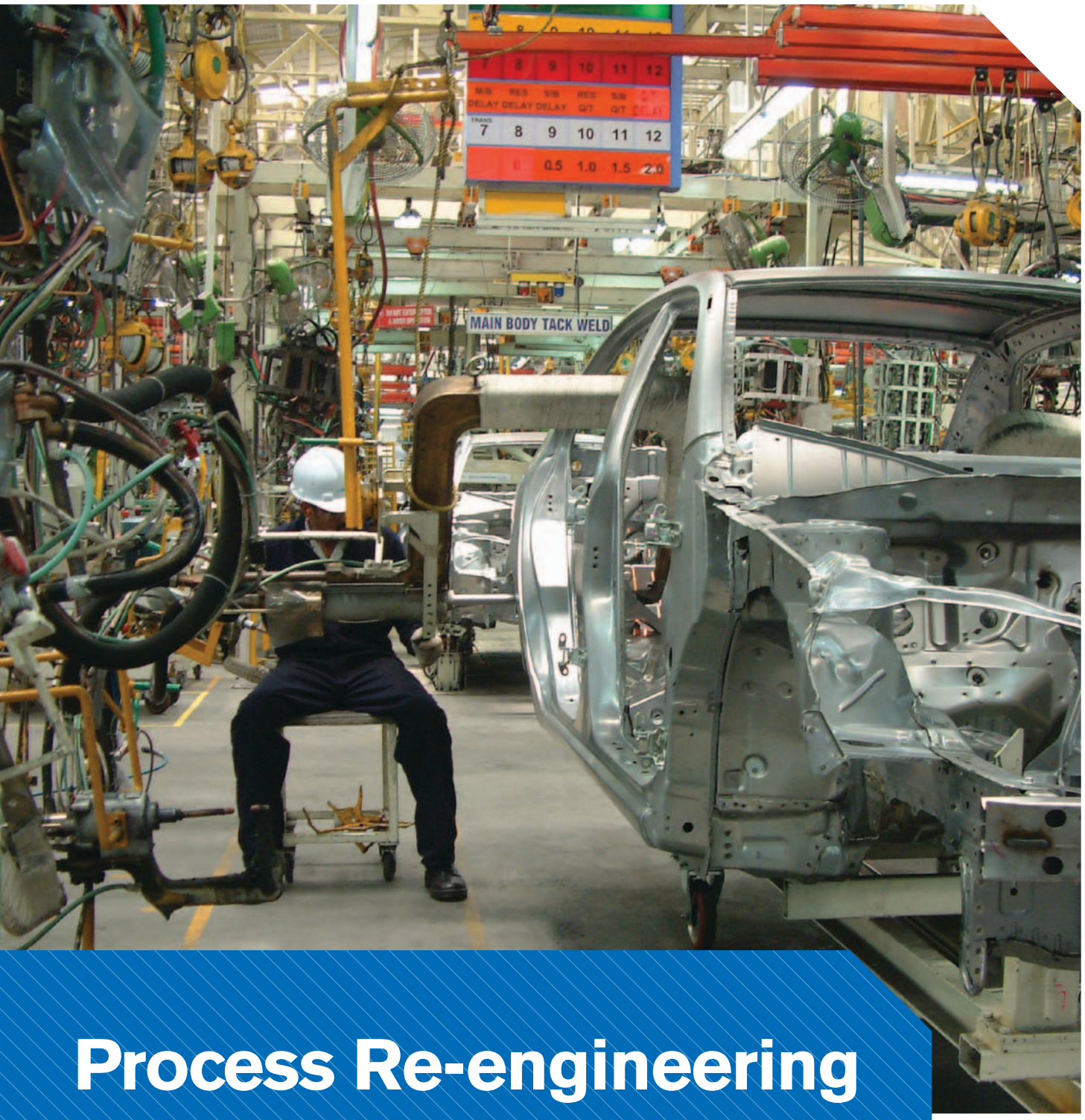
Whitepaper



Process Re-engineering

ERIKS

Tradition is often the barrier to progress; sometimes new processes are not investigated or sampled simply because we are not aware that they exist or believe that they do not apply to us or to our activities. However, new ideas in the field of process management, along with fresh approaches to problem-solving, are presenting new opportunities in our industry.

This paper discusses process management both in terms of theory and practice. Professor Andi Smart of the University of Exeter explains why the clear boundaries of tradition, defined by departmental structures, must be replaced by more fluid structures that reflect changing customer needs. The second viewpoint on the topic comes from Gary Price of *ERIKS*, who explains how those changing customer needs can be served by looking at things differently and encouraging customers to do the same.

End-to-end Process Management: Implications for Theory and Practice

Professor Andi Smart,
Professor of Operations and Process Management and Director of the Centre for Innovation and Service Research (ISR), University of Exeter Business School, with Dr Harry Maddern and Professor Roger Maull.

The term 'end-to-end' process management is now commonplace in the language and practice of operations. Managers are encouraged to migrate from functional process management to end-to-end process management to realise a range of performance improvements. However, these improvements are often elusive; the specific challenges associated with such a migration are under-researched. Three areas demand particular managerial attention: the need to move beyond process mapping, the role of IT, and maintaining the process infrastructure as a strategic asset. More significantly, the findings of recent research highlight the need for greater conceptual clarity regarding the end-to-end concept itself. The existing literature suggests that scope is the primary differentiator of the end-to-end process – the requirement to manage an extended boundary from customer order through to customer fulfilment. However, this research suggests that the end-to-end concept is more complex, comprising three core constructs with seven dimensions: scope (boundary conditions, sequence/flow and controls); scale (resources and input/output transformation) and complexity (inter-relationships and orientation). End-to-end process management involves much more than an extended boundary. It requires a systemic perspective and clarity regarding controls and transforming resources.

Existing operations management literature contains many models and frameworks identifying 'process' as a fundamental unit of analysis. The importance of the process concept is arguably unprecedented and can be seen to transcend research epochs: from the quest for increased productivity found in Taylorism in the early 1900s (Taylor, 1911), through the importation of Japanese philosophies and techniques (e.g. JIT, TPS) pursuing economic efficiency, to the concentration on the reduction in defective output exemplified in Six Sigma programmes. In each case (productivity, efficiency, and effectiveness) it is possible to identify the role of the process concept, at least in implicit form, as an organising factor.

The concept of process or business process is widespread in the operations management literature. Process thinking implicitly (or explicitly) often underpins literature in diverse areas such as finance, quality, innovation, customer relationship management, etc. Smart *et al* (2009), among others, provide a synthesis of much of this work. They articulate a model of Business Process Management (BPM) comprising 'application' components for infrastructure development and

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on the development of an end-to-end process architecture as a means for understanding the organisation from a business process perspective (Pritchard and Armistead, 1999). Many authors have emphasised the need to adopt a customer viewpoint and to manage processes from a 'horizontal' rather than a 'vertical' perspective (Armistead, 1996; Zairi, 1997; Hammer, 2002; Skrinjar *et al*, 2008). Goldkuhl and Lind (2008), for example, describe a business process as 'moving from customer requirement to customer satisfaction'. Similarly, Kohlbacher (2010) suggests that organisations engaged with BPM focus on 'customer to customer' business processes.

'conceptual' components that constitute a necessary foundation on which deployment is based.

One of the key foundational conceptual components in this model suggests that sustained, conscious process management operates on an end-to-end basis, from initial customer request to customer fulfilment. Considerable emphasis is often placed

Challenges arise in respect of more complex flows and the need for more sophisticated, adaptive controls. The migration to end-to-end process management also demands a consideration of all aspects of the input/output transformation. Focus shifts from the operational procedure itself to a broader context that considers how transforming resources such as people and systems are utilised to

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effect the transformation. This extended definition of process demands an integrated approach to improving the end-to-end process. This is exacerbated by the need to manage multiple end-to-end processes, aligned to customer requirements. The clear boundaries provided by departmental structures are replaced by more fluid structures reflecting changing customer needs and opportunities to organise around perceived customer priorities.

The findings of recent research contribute to management practice in a number of ways. Managers are alerted to a range of challenges arising from end-to-end process management and guidance is offered to address these challenges. The prevailing focus upon process mapping is questioned and managers are advised to implement all aspects of an end-to-end process infrastructure to optimise performance improvement. Managers are also advised to carefully consider the role of technology in end-to-end process management. The findings suggest that this can be a prolonged and expensive exercise and attention is drawn to organisations that have successfully implemented end-to-end process management without incurring such costs. Managers are also alerted to the frequency with which expensive process technologies are abandoned in favour of alternative options. Perhaps the most significant guidance concerns an early recognition of the end-to-end process infrastructure as a strategic asset requiring ongoing maintenance. The findings highlight a marked contrast between the scale of investment in launch activity and investment in the ongoing process infrastructure. Whilst many organisations recognise a need to maintain traditional assets such as buildings and equipment, the lack of familiarity with process as an asset makes this practice more difficult to implement.

A clearer understanding of the end-to-end process concept is particularly important to the Operations Management community in which process is a core concept. The growing body of research is helping to close the gap between the narrow, functional process perspective that dominates current academic thinking, and the wider process perspective required to develop theory to inform current managerial challenges.

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Business Processing Re-engineering

Customisation for Design, Manufacturing and Production

CUSTOMISATION THROUGH AUTOMATION, MATERIAL TECHNOLOGY AND SPECIALIST MANUFACTURE PROVIDES INNOVATIVE RE-ENGINEERING SOLUTIONS FOR DESIGN, MANUFACTURING AND PRODUCTION PROCESSES. THESE SOLUTIONS ENABLE DRAMATIC IMPROVEMENTS IN PERFORMANCE AND A SUSTAINABLE COMPETITIVE ADVANTAGE.

Gary Price,
International Product Manager,
ERIKS

Business Processing Re-engineering, whether it be achieved via automation, material technology or specialist manufacture, is essentially innovation, because it requires us to look at things differently. It means not doing things the way that they have always been done. It also means finding solutions that are relevant by taking the time to understand customers, establish a much closer relationship with them and, essentially, becoming an extension of their business. In our papers on Inventory Optimisation and Acquisition Cost Savings, we've discussed specific examples of how becoming more involved and establishing a close relationship with the customer enables the solutions provider to give better advice, and how more and more advantages present themselves as the relationship progresses.

This is also true of Business Processing Re-engineering. If you do it right, you tap into every conceivable area that you're supplying, from looking at the bearings, ensuring that they've got the right actuator to get the best possible

performance, right the way through to engineering the hardware or software that controls it for them. Not only does this create excellent solutions for customers, it also allows them to focus on what they do best. So, instead of trying to work out how best to optimise the system, the customer can focus on how best to manufacture its product.

One of the problems faced by automation manufacturers is that without experience, specialised knowledge and an awareness of the latest automation technology, in-house engineering teams are simply not capable of building the most efficient, optimised, cost-effective system. This is likely to result in an over-expensive build and, worse still, a less efficient and less capable system that does not maximise profitability for the customer. Expertise provides a massive ROI and the know-how delivered by the experienced solutions provider comes with the added expert knowledge of the component manufacturers that it works with. It's not just the solutions provider working in isolation; it's often a partnership with its main suppliers. *ERIKS* can draw on the technology available from its largest suppliers, which are not able to do this type of project work on their own but are keen to work with *ERIKS*, so the customer is getting the best of both worlds: support from high tech manufacturers and the broad knowledge of products and solutions that *ERIKS* can supply. Together, these 'superteams' of experts can look closely at the customer's processes and devise better solutions. The success of Business Processing Re-engineering ultimately it comes down to how well the solutions provider knows the customer, its willingness and capability to innovate, and the knowledge and expertise that it has access to.

ERIKS has the facility to create bespoke customer solutions all the way down the line, by bringing in a specific motor, specifying the drive that goes with it, providing software and hardware solutions and designing the structure that everything drops into. However, to gain the best advantage it is important to discuss all of this at the design stage, so that no opportunities are missed; if not, the system design may progress beyond a point at which a more efficient solution can be introduced. With options left open, there is more potential for optimisation. This is especially true of *ERIKS* because it is not a manufacturer that only wishes to prescribe its own products, and so can identify the best components for the customer solution. Also, where the big automation suppliers can only offer certain parts of the solution, *ERIKS* can bring them together, offering a broad and unlimited view that fosters the most efficient solutions.

It's important to mention, too, that *ERIKS'* capability to provide solutions for OEMs has developed from a whole range of skills honed during its origins as an MRO-only supplier, and those skills are still available – and enhanced – for MRO customers. The skills that *ERIKS* uses within, for example, automation – to look at a project

> "Using a provider that understands current processes and how to re-engineer them for improved customer performance is the best way to ensure this competitive advantage."

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from the very beginning and to work on a solution that's going to match the KPIs of the customer – can be applied to MRO customers more effectively than ever.

Of course, innovation is not only about experience; it is, as we said at the start of this paper, about looking at things differently. It is about change. *ERIKS* can innovate because it has a great depth of experience but also because it is keeping its expertise fresh as technology changes. Some technologies change fast, and *ERIKS* can keep up with this change because it has a reputation for attracting and retaining young people. *ERIKS* runs a lot of apprenticeship programmes and this year was certified as one of Britain's Top Employers by the CRF Institute, an organisation that identifies top performers in Human Resources. This is a great benefit to *ERIKS'* customers, since better trained staff, a higher retention of experts and proper development and nurturing of talent delivers the innovative spirit required for excellence in Business Processing Re-engineering.

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