



Kerry Mashford, Head of Sustainable Manufacturing & Construction, Arup

Associate Director Current Position Head of Sustainable Manufacturing & Construction Joined Arup 2006 Qualifications Brunel University. Doctorate by research in design theory and methodology, and its application to production machinery. University of Cambridge. Master of Studies in Interdisciplinary Design for the Built Environment Cranfield Institute of Technology. Masters by research - epicyclic gear systems. BSc Hons in Mechanical Engineering Professional Associations Chartered Engineer Fellow of the Institution of Mechanical Engineers Fellow of the Royal Society of Arts and Manufacturers.

Publications 1986: Conference paper: "Efficiency of Compound Epicyclic Gear Systems", US 1992: US Patent: "Motion capture technique using a video overlay device" 1993: Conference paper: "A Constraint Based Methodology for the Design of Cam-Driven Systems", Europe 1997: Invited address: "Agile Machinery and its Role in the Factory of the Future", EEC conference on Industrial Technologies. Key Data Future thinking, informing strategic guidance of research, development and commercialisation in manufacturing, manufacturing in construction, sustainable manufacturing and other technology-based enterprises. Initiation and execution of product and technology innovation projects and initiatives involving stakeholders from industry, academia, government. Value stream (supply chain) understanding, related decision making and implementation – product and process innovation and improvement, particularly exploiting sustainable principles of agile manufacturing and mass customisation to support high innovation rate markets and deliver environmentally sustainable solutions. Creation of new business streams including the introduction of potentially disruptive (radical) new technologies and systems and the creation of corresponding supply chains.

Management of research, development and new product introduction projects (i.e. those with significant degrees of risk and uncertainty). Facilitation of multi-disciplinary teams and teams comprising customers, suppliers, services, commercial and public sector, mainly in manufacturing and construction. External Responsibilities Council member – IMechE Immediate past Chair of Manufacturing Industries Division – IMechE Member of cross institution Manufacturing Sector Panel Visiting lecturer – University of Bath Steering Group member – Cardiff University IMRC Director – Milton Keynes and South Midlands Architecture and Built Environment Centre School Governor Relevant Selected Projects Project director of an EU supported private / public sector programme in sustainable off-site manufacturing, drawing research through to commercialisation and covering sustainable technologies, renewable energy, skills, SME development, sub-regional socio-economic impact and dwelling lifecycle. Created new business stream based on disruptive textiles manufacturing technology and embedded it in the client company. Founding board member of an audio-visual building-systems company. Managed the Manufacturing 2020 Foresight programme for the DTI, delivering generic visions for UK Manufacturing, helping companies plan for the future through strategic planning, R & D strategies. Devised and managed a research portfolio to prepare Unilever's manufacturing capability and innovation processes for the 20 year horizon in consumer behaviour and lifestyles worldwide. Specified and led the development of a management information tool in capacity planning to meet specified demand scenarios and operational practices. Initiated and led a project to produce high quality prototype primary packs for use in consumer panel testing, reducing time for fixing final pack design from 4 weeks to 1 day with cost reduced 100 fold while significantly improving sample quality. Built a centre of excellence in production machinery technology undertaking internal consultancy and collaborative research serving consumer products operating companies. Led and directed an extensive 'research to roll-out' programme over period of five years. Initiated and project managed the design and build (build time of 14 weeks) of a 320 m2 sustainable demonstration house for the 1994 Future World exhibition incorporating novel methods, technologies and design philosophy.