

Design Economies: Moving on from the Knowledge Economy

The central and essential role of design activity and infrastructure in local economic and social development



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New Design Economies

Design Economy



Knowledge/Information Economy



Industrial Economy



Agricultural Economy



Definitions

To *Design*:

To devise a plan to change an existing situation into a preferred one (Simon, 1984)

A *Design*:

A specification or plan for changing an existing situation into a preferred one

Design infrastructure:

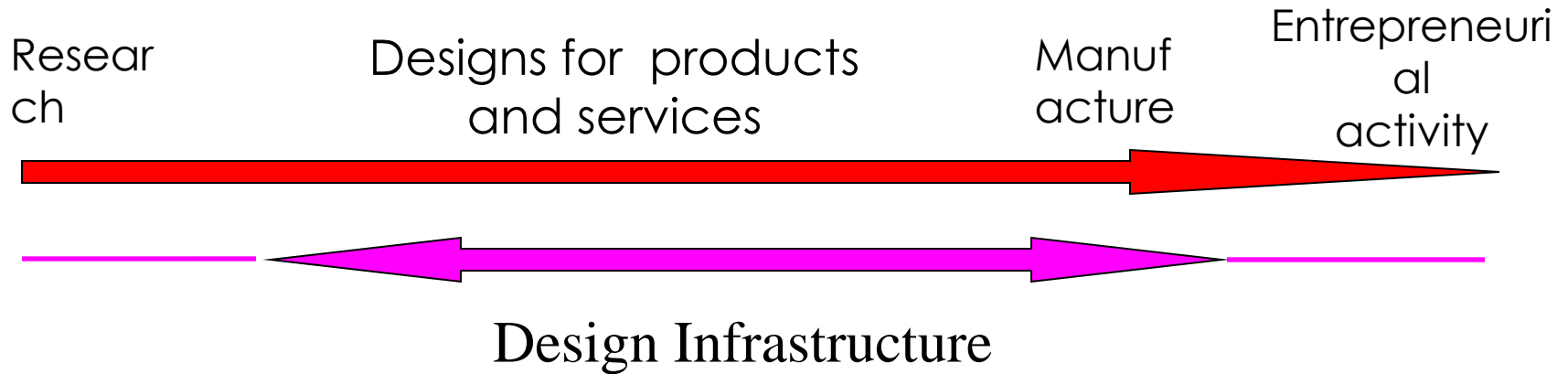
The expertise and resources necessary to convert information and new knowledge into designs for real world products, services, systems, organisations and policies.



Economics of Design in UK

- British Businesses spend approximately £30 billion pa on design services - approx 3% corporate turnover (exceeding the 2.1% spent on R&D).
- UK exports of Design services are approx £1 bn per annum
- The design consultancy industry is around 4000 businesses and 80,000 staff.
- 90% of rapidly growing businesses say design is integral to their operation – only 26% of static businesses say the same.
- 74% of rapidly growing companies say that design is important to their competitive edge over the last 10 years - compared to 44% overall
- 64% of rapidly growing companies say design, innovation and creativity has contributed strongly to their competitiveness over the past 3 years – compared to 14% overall.
- The shareprice of companies renowned for their effective use of design outran the FTSE100 index by 65% (1995-2002) and outperformed it by 23% in the bearmarket of 2000-2002.
- These are significant UNDER-estimates of the significance of design activity in successful business, entrepreneurship and innovation (see below)

Elements of Successful Innovation





Scope of Design Activity

There are over 650 different sub-fields of design activity. These divide into three groups:

- Technical design fields (engineering construction, information systems, software, hardware etc)
- 'Art and Design' design fields (graphics, fashion, photography etc)
- 'Other' new design fields (e.g. social program design, organisation design; business process design; e-business system design; change management design; government policy design, curriculum design, etc)
- The proportions appear to be approx: Technical-40%; Art & Design-10%; 'Other' design-40%.



Design and Local/Regional Economic & Social Development

- Business dependency on design skills is high
- Local/regional GDP increased significantly with increased levels of design services support
- Design Services are SMEs with high levels of high value/low cost regional & national exports

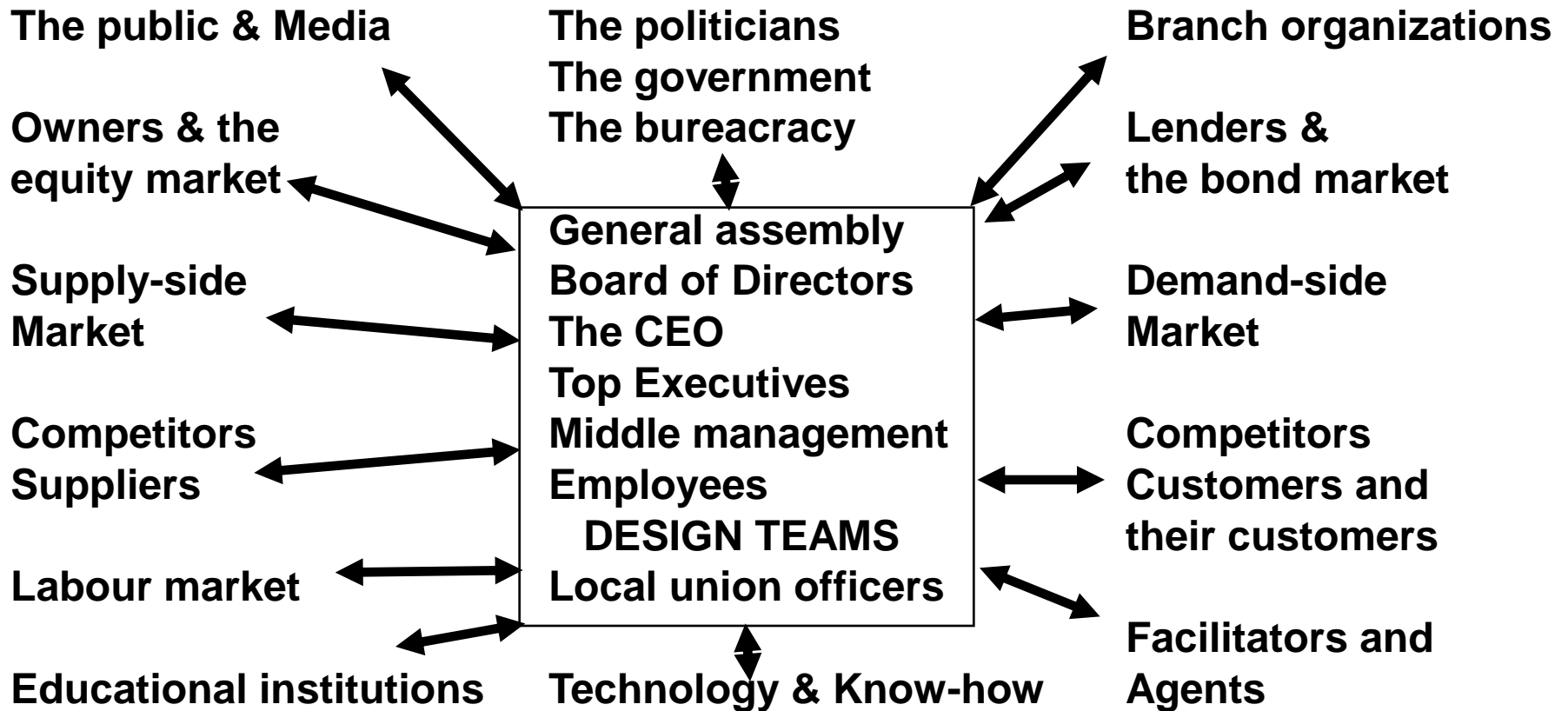



Central Role of Design Activity

- Design activity is central to gaining real world outcomes from the use of information and 'knowledge'
- Improvement in efficiency and effectiveness of design activity results in direct improvements to business outcomes and to economic and social development



Design constituencies





Benefits of Design Infrastructure

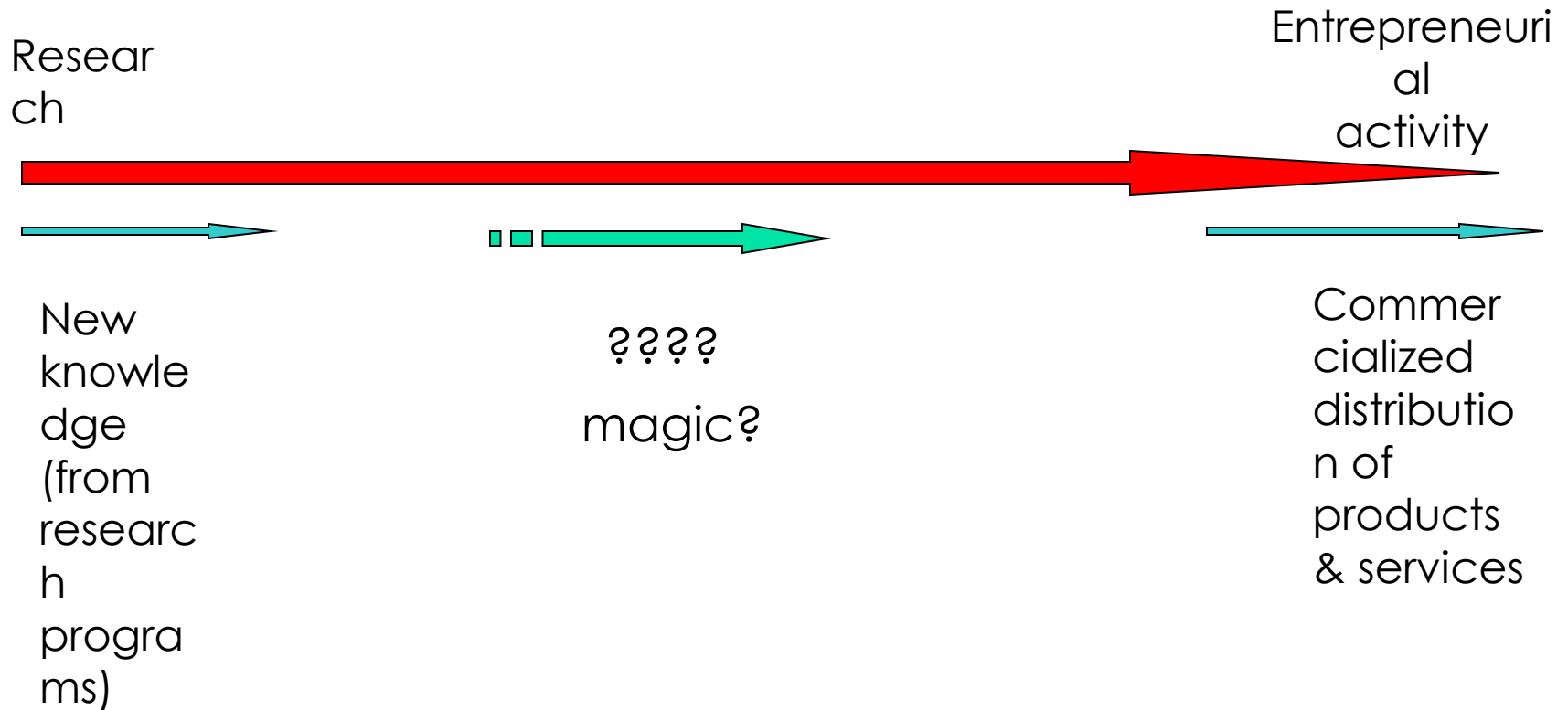
- Strong local and regional design infrastructure increases national economic and social benefits by improving efficiency and effectiveness of design processes
- Allows increased complexity in the designs for products and services
- Shortens time to market
- Reduces effects of IPR protection
- Reduces downstream costs shaped by early design decisions
- Minimises risks of product and service failures.



Failure of Knowledge Economy

- Knowledge (like information) has support role (not central) in local economic and social development
- Lower than expected performance of computer-based knowledge systems
- Blocks identification of real activities using information and information-related skills to create local economic and social development
- 'Knowledge is an poor concept that is typically used in an epistemologically flawed manner that reflects in compromised real world outcomes

Research and Entrepreneurship Innovation Model





Target areas

- 1 Improved management of expertise and resources in design to gain competitive advantage
- 2 Improvements to designing at individual and team levels to better support the vision, mission and strategic outcomes of planned organisational processes



Design Projects – Local and Regional Development

- Mapping design needs and design services of local and regional businesses (UK)
- Mapping design needs and design services for local and regional businesses (Portugal)
- Mapping design needs and design services for local and regional businesses (Australia)
- Identifying optimal design infrastructure provision – 3 year fully funded project investigating UK, Finland, Korea, Norway and 5 States in Australia
- Benchmarking Portugal's design infrastructure (52 researcher project).
- Identifying scope of design activity (completed)



Other Design Projects

- Designing organisations
- Managing human issues to reduce rework in design activities
- Functioning and management of multidisciplinary design teams
- Designing partnerships between Community Organisations and Criminal Justice Agencies
- Managing the designing of public space
- Affective issues in virtual teams designing information systems
- Managing government Youth Work services policy to 2015
- Australian national design infrastructure
- Tacit skills in designing molecules with specific properties
- Managing roles of designers in innovation programs
- Developing a cross disciplinary degree in designing that includes design management