



Lean in the Service Sector

Extending Education to the Forgotten 80%

Simon Elias
Education & Commercial Director
Lean Enterprise Research Centre
Cardiff University, Wales, UK

Lean Enterprise Research Centre

Cardiff University

- Formed in 1994 by Prof Dan Jones & Prof Peter Hines

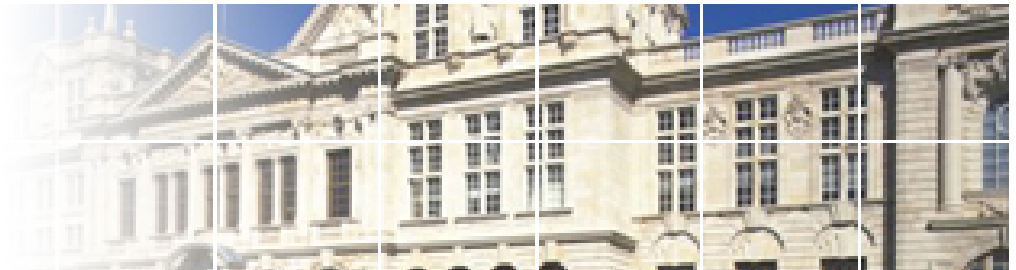
➔ 30 staff now

“Researching, applying, & communicating lean thinking”

- Cardiff University

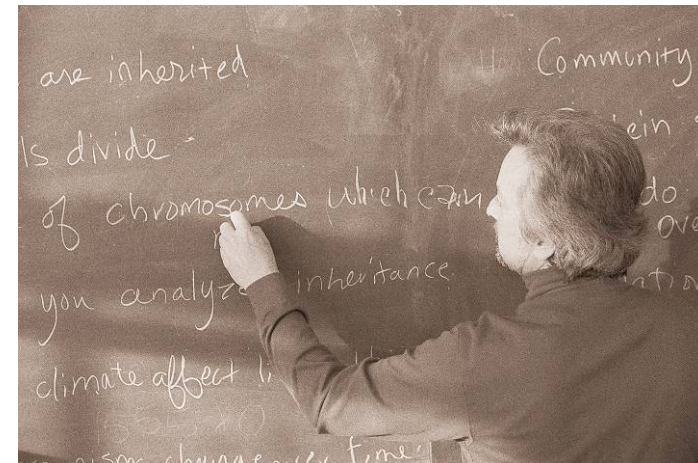
➔ A leading UK teaching & research university

➔ Royal charter 1883; 25,000+ students



LERC Education

- MSc in Lean Operations
- Modular MBA in Supply Chain Management
- Specialist bespoke courses eg
 - ➔ Manufacturing, Supply chain
 - ➔ Automotive retailing
 - ➔ Defence, Public administration
 - ➔ Contact centres
- Executive short courses
- E Learning
- Lean Competency System



Contents

- MSc in Lean Operations
- History, development & aims
- Course structure, delivery approach
- Course Support
- Extension to the service sector
- Lessons learned
- Questions



The MSc in Lean Operations

- Origins: LERC 'LEAP' research programme 1997
 - ➔ Shortage of 'Kaizen engineers'
- Poor lean course provision in UK
- LERC well placed – 'research led' education
- Developed 1998 & launched in 1999
 - ➔ World's first dedicated lean master's programme
- New course each year
 - ➔ 8th course started Sept 06



Target Market

- Manufacturing, production sectors
- Experienced, senior operations managers
- Desire to learn & apply lean principles
 - ➔ Lean part of business strategy
- Aspirations to be world class
(or simply survive...)



Objectives

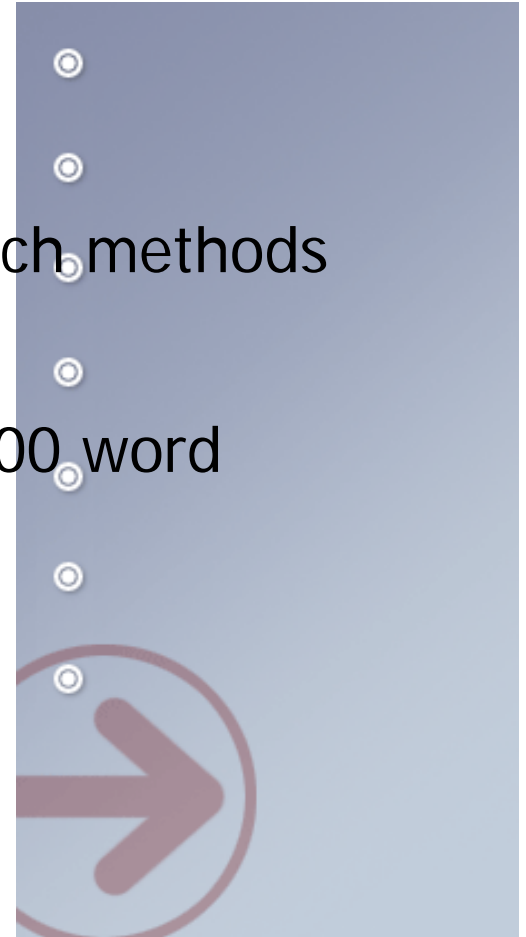
**Equip students with
the appropriate
skills & knowledge
to become
accomplished &
expert lean
practitioners**

- Application of lean tools
- Become catalysts of change
- Stimulate to challenge the way they approach work



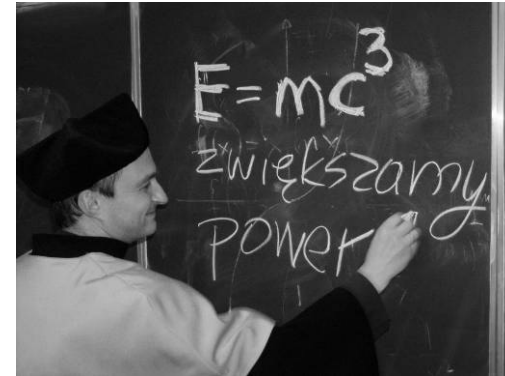
Structure

- 2 years part-time:
 - ➔ first 15 months: eight 5 day courses
 - ➔ final 9 months: dissertation & research methods
- Assessment:
 - ➔ Dissertation (20,000 words), 8 x 4,000 word assignments, exams x2
- Small group teaching:
 - ➔ Class size: 12 – 15
- £20,000 total cost (\$37,800)
 - ➔ £14,000 fees (\$26,000)

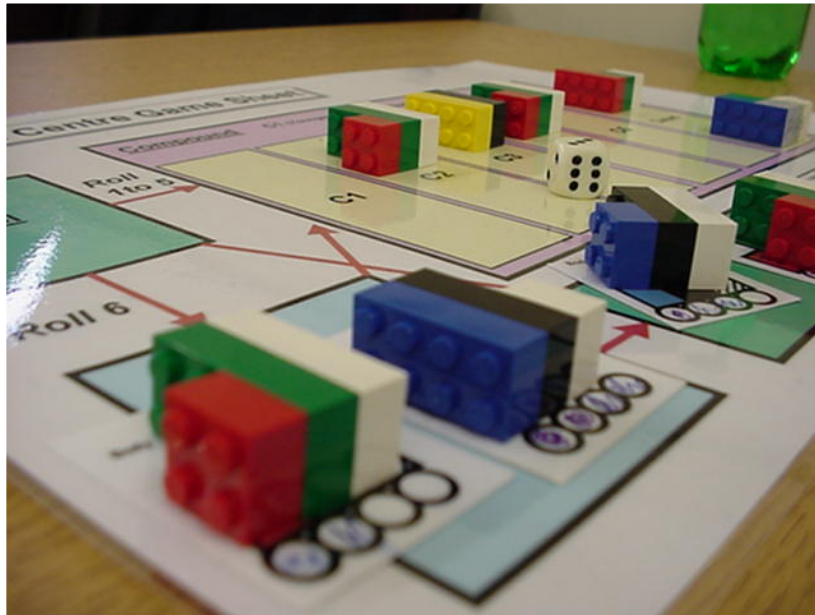


Delivery Approach

- 'Traditional' lectures
 - ➔ Provided by academic faculty
- Practical link, industry context
 - ➔ Provided by expert practitioners
- Most courses take place at students' organisations
 - ➔ PDCA
- Team based exercises
 - ➔ case studies, games, exercises
- Encourage participation, discussion
 - ➔ Networking benefits significant

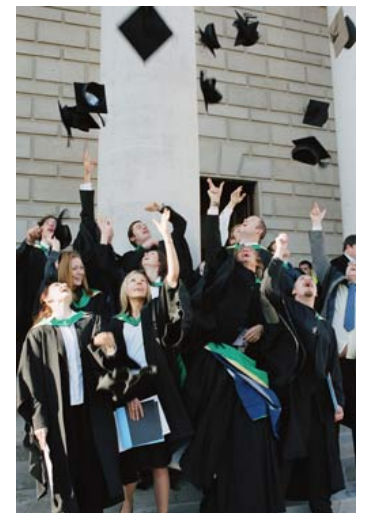
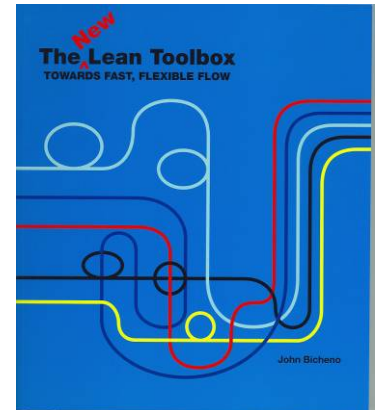


“Learning by Doing”



Support for Lean Implementation

- Practical tools
- Policy deployment frameworks
- Games & exercises
- Short courses
- Alumni activity
 - ➔ Conferences, seminars
- LERC's "Lean Competency System"



Lean Competency System: Overall Proposition

- Mechanism to promote & develop lean learning through the provision of a structured lean qualifications system
- Hierarchy of lean competences
 - ➔ “Learning ladder”
 - ➔ Knowledge & practical orientation



Main Levels

1. Fundamental

2. Technical

3. Strategic

Sub Levels

- a. Awareness of lean principles
- b. Knowledge & experience of specific tool
- c. Knowledge & experience of several tools

- a. Ability to apply specific tools with support
- b. Ability to apply specific tools without support

- a. Ability to develop a lean programme in a dept
- b. Ability to develop a lean strategy in an org

Qualification certificate awarded

- Assessment/Evidence based, testing, project, etc



Certificate

LEAN ENTERPRISE RESEARCH CENTRE



Certificate of Lean Competency

This is to certify that

James Bloggs

Has Demonstrated Competence in
Lean Thinking Knowledge & Practice

Technical Level 2A

Professor Peter Hines
Director,
Lean Enterprise Research Centre



January 2004

Individual Courses

Lean Thinking & Practice

Quality & Six Sigma

Supply Chain Management

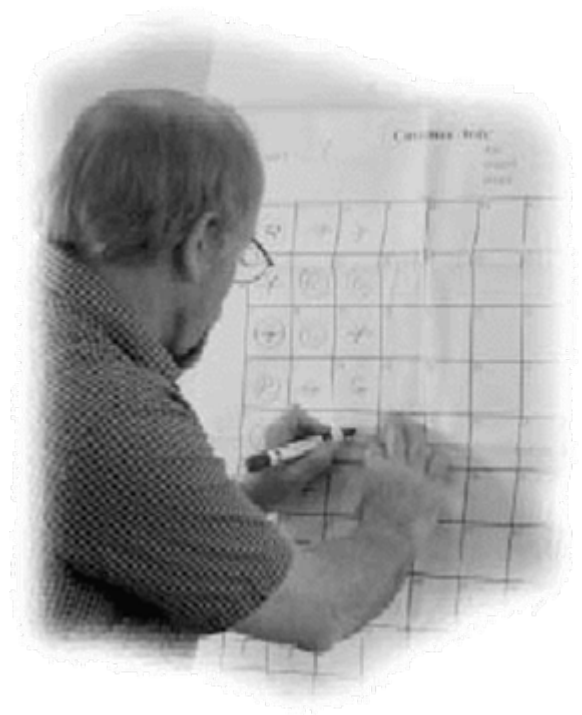
Mapping Waste, Value & Time

Changeover, TPM & Layout

Lean Scheduling & Materials Mgt

Teams & Change Management

Design & Performance Measurement



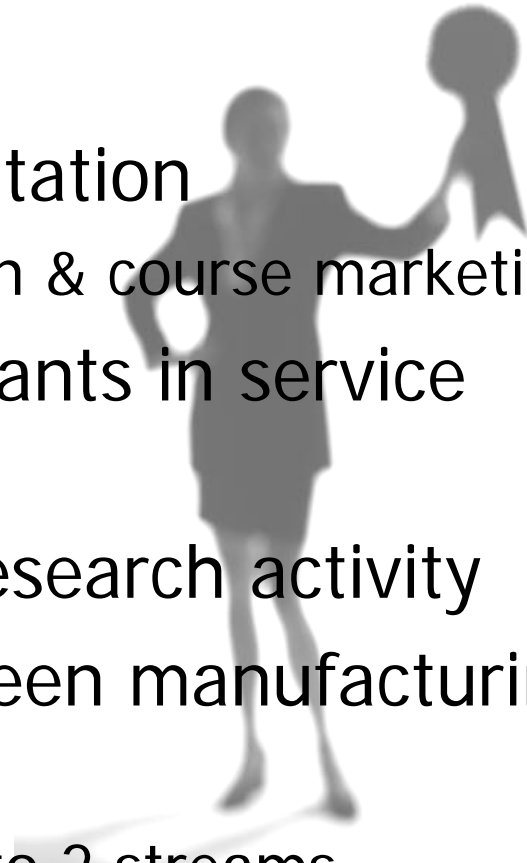
Study Tour

- End of 2nd year
- Experience approaches to lean in a different context, culture & climate
- Lectures, conference, visits, group activities
- 2001: Italy
- 2003: South Africa
- 2004: USA
- 2005: AME, USA
- 2006: AME, Canada



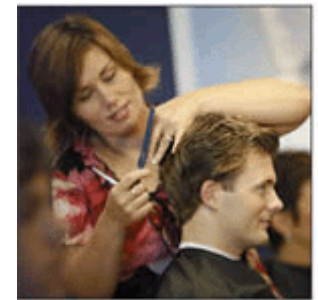
The MSc in Lean Operations

- Proved very popular:
 - ➔ All courses fully subscribed
- Inevitable manufacturing orientation
 - ➔ Reflecting lean's initial application & course marketing
- Increasing interest from applicants in service organisations
- Growth of LERC lean service research activity
- Fundamental differences between manufacturing & services ...
 - ➔ Led to decision to split course into 2 streams



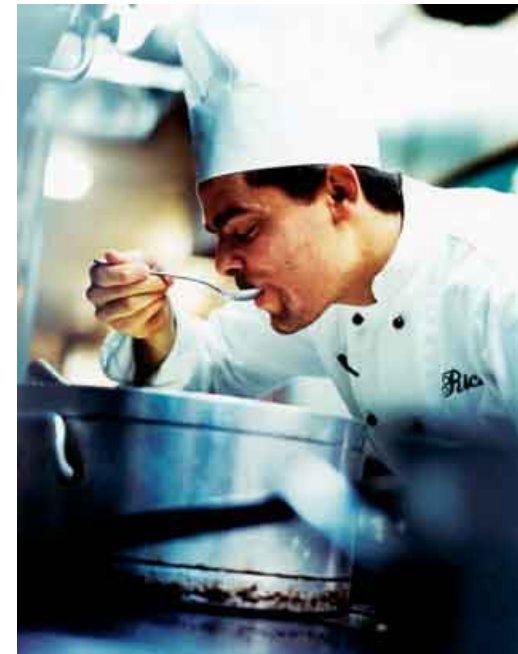
Manufacturing v Service

- Cannot simply pick up the lean manufacturing toolbox & apply in services...
- Unique characteristics of services dictate an adapted approach, eg:
 - ➔ Intangibility
 - ➔ Perishability
 - ➔ Heterogeneity
 - ➔ Demand variability
 - ➔ Simultaneous production & consumption (Inseparability)
 - ➔ Lack of ownership



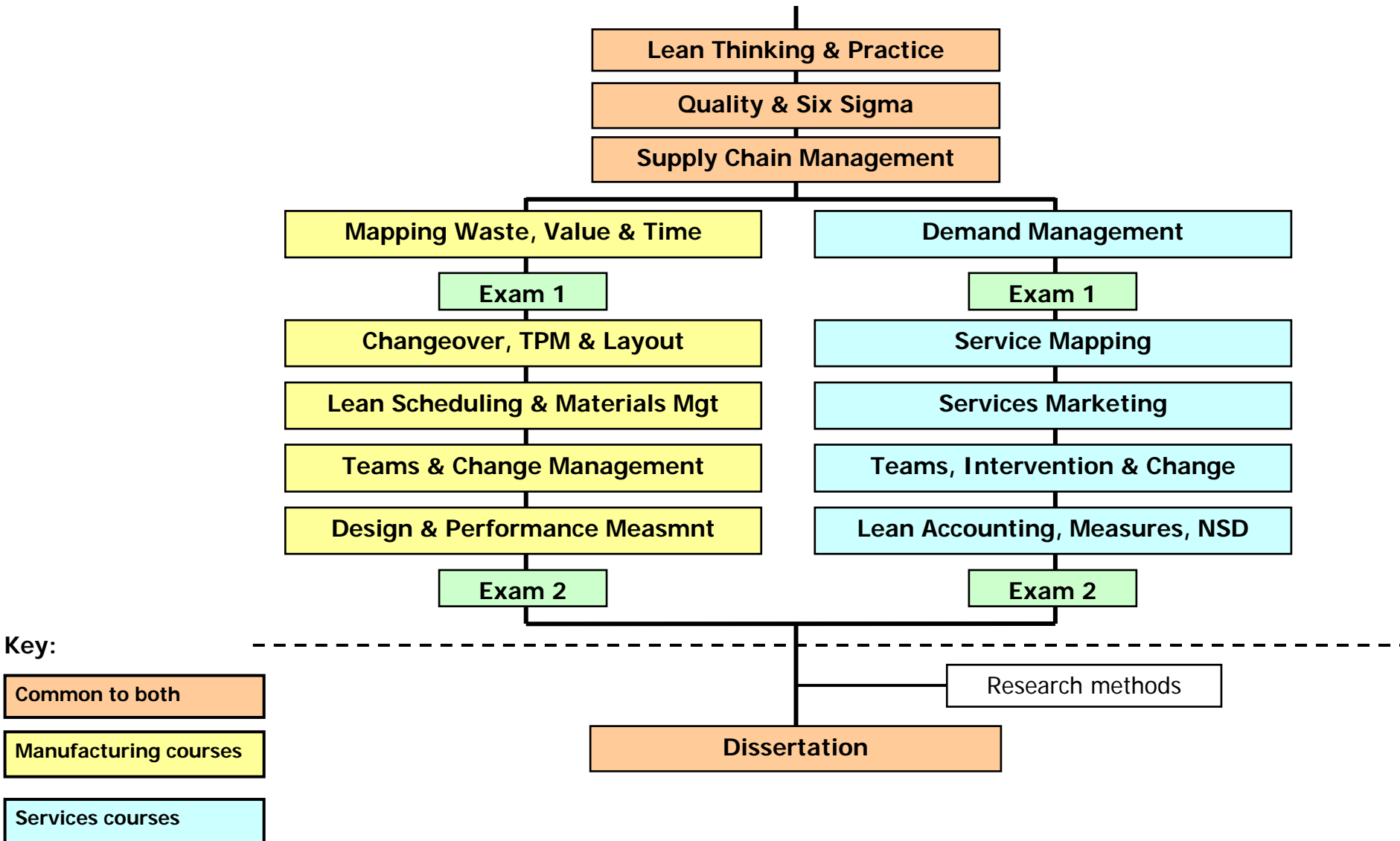
Services Challenges

- Understanding customer needs and expectations for services
- Variation & capacity planning
- Tangibilising the service offering
- Dealing with a myriad of people & delivery issues
- Keeping promises made to customers



Two Streams

MSc Lean Operations



Service Stream

- Developed & piloted material in lean service short courses
 - ➔ Financial services, local govt, contact centres
- Same structure & approach as Manufacturing stream
- Greater marketing effort
 - ➔ Reflecting less advanced lean application in services
- Sectors:
 - ➔ Financial/insurance, Healthcare, Defence, Retail, Public Administration
 - ➔ Service elements of manufacturers

Summary: Lessons Learned i

- Academic v practical balance
 - ➔ Companies demand more direct 'return on investment'
 - ➔ Create linkage with student's role
- Learning by doing: critical element
- Course leaders with extensive practical experience important
 - ➔ Executive student expectations...
- Higher management overhead necessary
 - ➔ Dedicated 'course director'



Summary: Lessons Learned ii

- Company locations for courses provide unique learning opportunity (& popular)
- Company sponsorship & endorsement important
 - ➔ Clear lean oriented strategy
- Tools etc to support students
- Different course material required for services compared to manufacturing
- Importance of student networking, alumni
 - ➔ Informal knowledge transfer



Questions



Thank You

elias@cardiff.ac.uk

www.leanenterprise.org.uk

