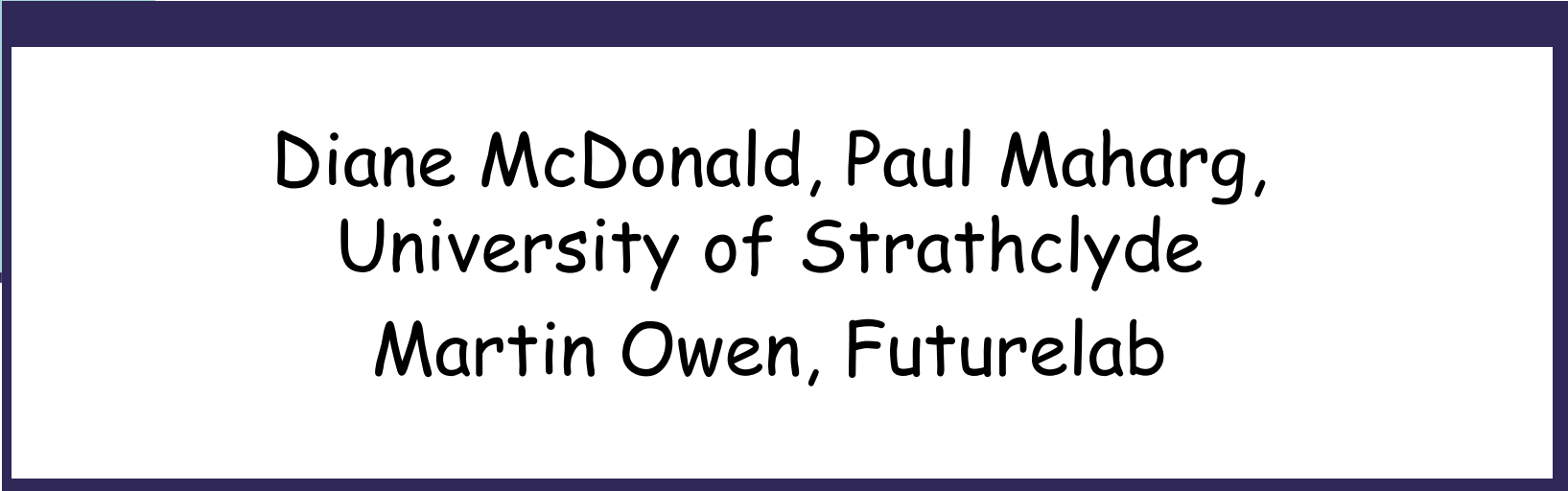




Embedding Innovation



Diane McDonald, Paul Maharg,
University of Strathclyde
Martin Owen, Futurelab

Contents

1. Overview of innovative learning at Strathclyde
2. Creating and embedding change - issues
3. The Transactional Learning Environment project
4. Conclusions & discussion questions

1: University of Strathclyde

- Long history of HE, becoming University in 1964
- Devolved management infrastructure
 - Faculties (5), formerly departments (2005)
 - Senior management team
- Committee structure
- University regulations
- Strategic plan

1: Innovating and embedding teaching and learning @ Strathclyde?

- Innovating
 - The challenges?
 - The tools?
- Embedding
 - The challenges?
 - The tools?

1: Innovation in technology enhanced learning

- **CVU** - Clyde Virtual University
- **Spider** - Strathclyde Personal Interactive Development & Educational Resource
- **SLI** - Strathclyde Laptop Initiative
- **DIDET** - Digital Libraries for *Global Distributed Innovative Design, Education and Teamwork*
- **REAP** - Re-Engineering Assessment Practices in Scottish Higher Education
- **TLE 1.0** - Transactional Learning Environment

1: CVU - Clyde Virtual University

- Funded in 1995 as Europe's first virtual university, by the Scottish Higher Education Funding Council.
- online resource centre
 - Learning and assessment material + discussion forum
 - for students and staff @ Strathclyde, Glasgow, Glasgow Caledonian and Paisley Universities, Glasgow School of Art
- Ended due to lack of funding
- **Timeliness and embedding problematic**
- **Technology led**

1: Spider - Strathclyde Personal Interactive Development & Educational Resource

- 1998 - started as a web project to convert a single Pharmacy teaching module (class) into an interactive web environment.
- Success led to further modules within Bio-sciences
- 2003 - Combined with BRUCe to provide Science Faculty wide service
- 2005 - supports courses for other faculties
- Distinct from central Strathclyde Virtual Learning Environment (VLE)
- Faculty funded (www.spider.science.strath.ac.uk)
- **Bottom up growth**
- **Transforming effect of technology**
- **Competing Virtual Learning environments**

1: SLI - Strathclyde Laptop Initiative

- 1999-2000
 - Centrally funded from special projects pot
 - Wish to increase competitiveness through technology
 - Internal competition
 - Core teaching of 1st year business students
- 2002
 - Engineering & educational psychology - core funding
 - Business school self-financing
 - Deal for individual students - partnership with IBM
- 2004
 - Primary teacher education, funded -Scottish Executive
 - <http://www.strath.ac.uk/projects/sli/index.html>
- **Top down, pump-funding**
- **Embedded in new teaching practices**
- **Self-sustaining**

1: DIDET

- 2003-2008 JISC/NSF Project - Digital Libraries in the Classroom Programme
- Partners Universities of Strathclyde (DMEM, Learning Services, CAPLE, CDLR), Stanford, OLIN
- To *enhance student learning* opportunities by enabling them to participate in *global team-based design* engineering projects that give them experience of working within multi-cultural contexts. And to make this possible through a range of *information and communication technologies*.
- Emergence of solution and expertise
- 2006 -New course created in global team working
- How to role out to faculty?
- **External impetus, technology as an enabler**
- **Depth rather than breadth of uptake**

1: REAP - Re-Engineering Assessment Practices in Scottish Higher Education

- 2005 - funded by Scottish Funding Council
- www.reap.ac.uk
- Partners - Strathclyde, Glasgow Caledonian and Glasgow Universities
- Institutional transformation
- Course reengineering based on 7 assessment best practices to develop self-regulated learners
- Beginning to see wider embedding but
 - Measurement
 - Relation with transformational and organisation models/theory
- External financing
- Horizontal
- Collaborative journey

TLE 1.0

- 2000 Graduate School of Law
- objective to attempt to create a sense of a legal office, within a fairly recognisable west-coast Scottish town
- Transactional learning simulated environment
- Ardcalloch

Welcome to Ardcalloch - Microsoft Internet Explorer

File Edit View Favorites Tools Help

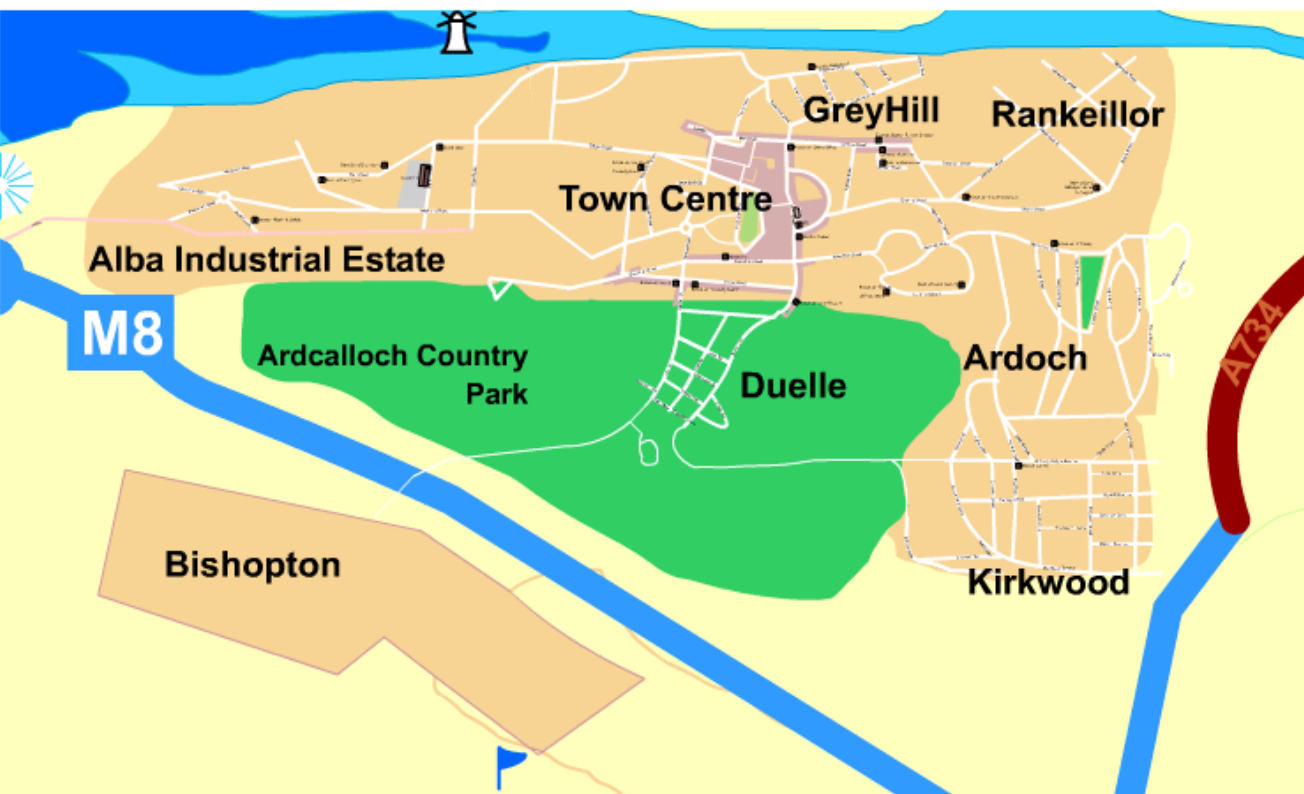
Address <http://www.ardcalloch.ggsl.strath.ac.uk/introduction/index.htm>

Google Search Web Search Site PageRank Page Info Up Highlight

Ardcalloch


1000 Years of History

Directory Map Introduction History: Please Select



[Town Centre](#)

High Street



zoom in + zoom out

Done Local intranet

Bell, Freeland & Dalton



8 Cullen Crescent

- About Us
- Our People
- Practice Areas
- Career Development
- Terms of Engagement
- Contact Us
- Useful Links
- Online Publications
- Intranet

About us

The firm was founded on the principle that to succeed, it must attract and retain lawyers who are committed to the highest levels of service and professionalism. The firm's commitment to excellence is the primary reason it has grown from 5 lawyers to over 25 lawyers today. During that time, we have expanded to include Glasgow, Edinburgh and Aberdeen offices, so that we can provide our clients with countrywide representation in many facets of litigation, personal and business law.

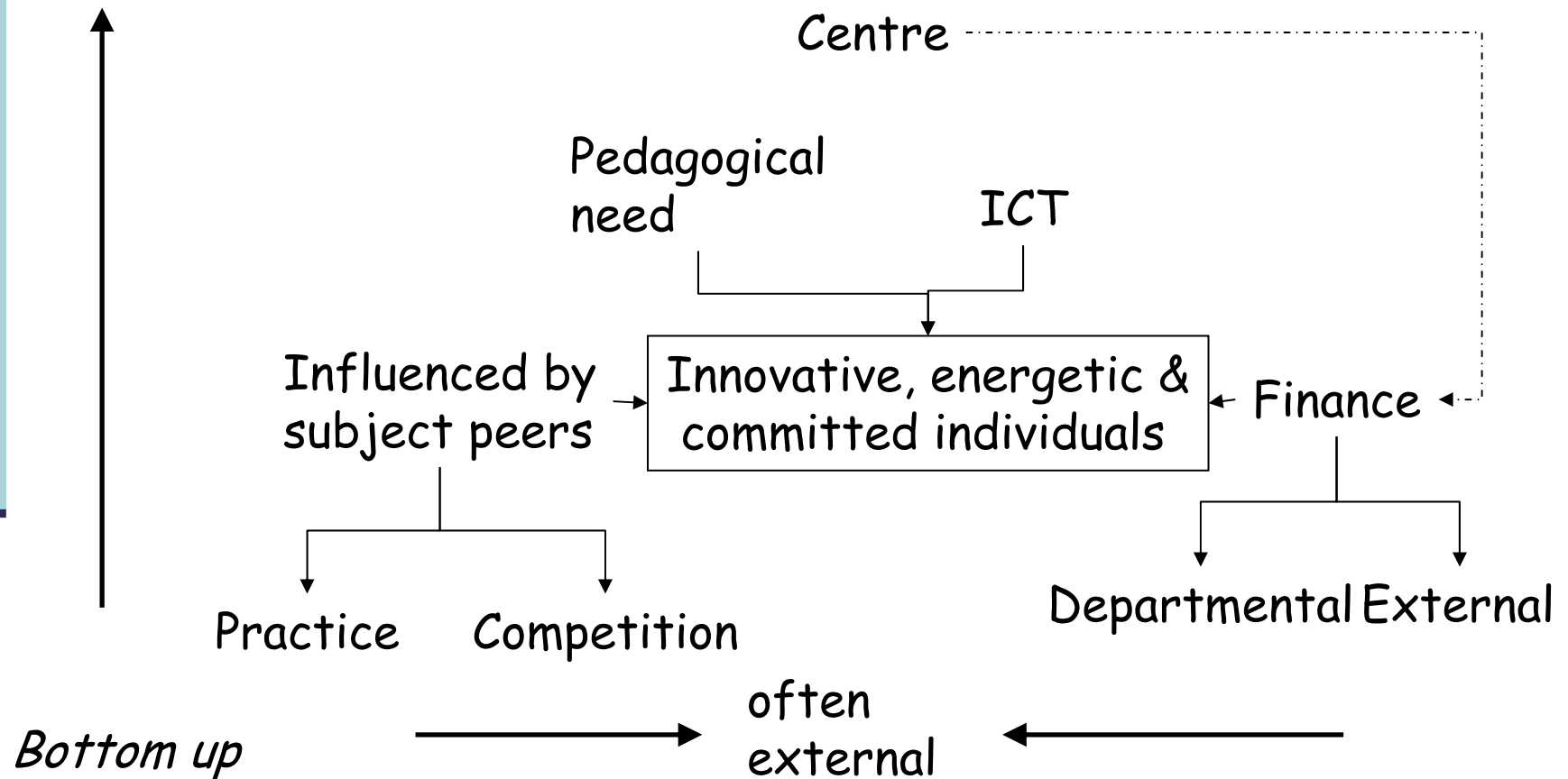
Our client base has grown rapidly since the firm was first started, principally because we recognize the need to become partners with our clients on all important decisions and to ensure that these decisions are consistent with clients' larger needs.

We have a reputation for being proactive, creative and innovative, both in our approach to providing legal services and in the way our firm is managed. It's a tradition we plan to continue, for the benefit of our clients and our firm.

TLE 1.0

- 2000 Graduate School of Law
- objective to attempt to create a sense of a legal office, within a fairly recognisable west-coast Scottish town
- Transactional learning simulated environment
- Ardcalloch
- Gradually expanded each year to include additional courses
- Course redesign
- **Highly innovative**
- **Key individual**

2: Critical factors in innovation @ Strathclyde



2: Issues with embedding innovation

- Financing
- Competing tools
- External versus internal
- Department/individual versus Centre/Management
- Moving beyond the 'first movers'
- One size does not fit all

3: TLE 2.0

- 2006 funded by JISC & UK Centre for Legal Education (UKCLE) [£200,000]
- Simulation environment for professional learning
- Pedagogy based on transactions
- Aims
 - Large scale role-out of innovative technologies
 - Cross-curricular
- Participants
 - University of Strathclyde - (Law, Architecture, Social Work & Statistics and Mathematical modelling)
 - Universities of Glamorgan, West of England & Warwick Law Schools
 - Futurelab

3: TLE participation implications

Technology

Pedagogical

Organisational

reliability

Enabling team-working

Time commitments

Support

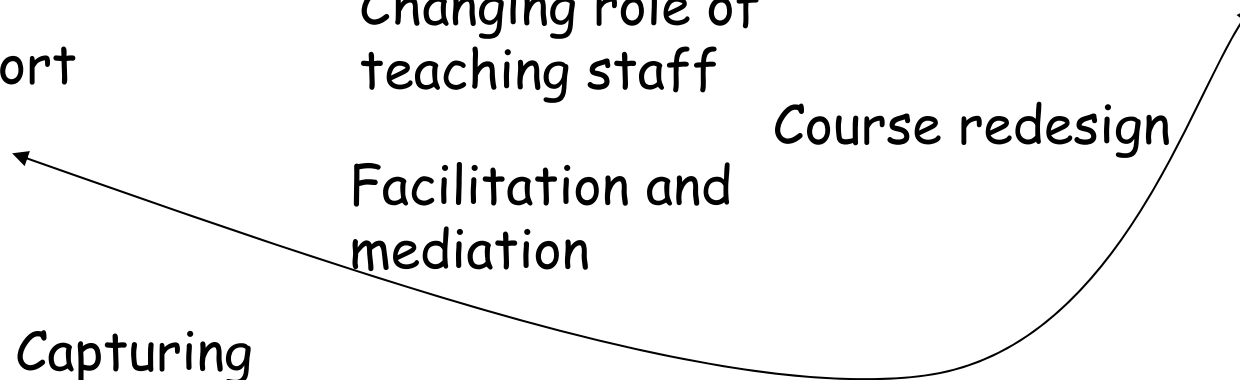
Changing role of
teaching staff

Course redesign

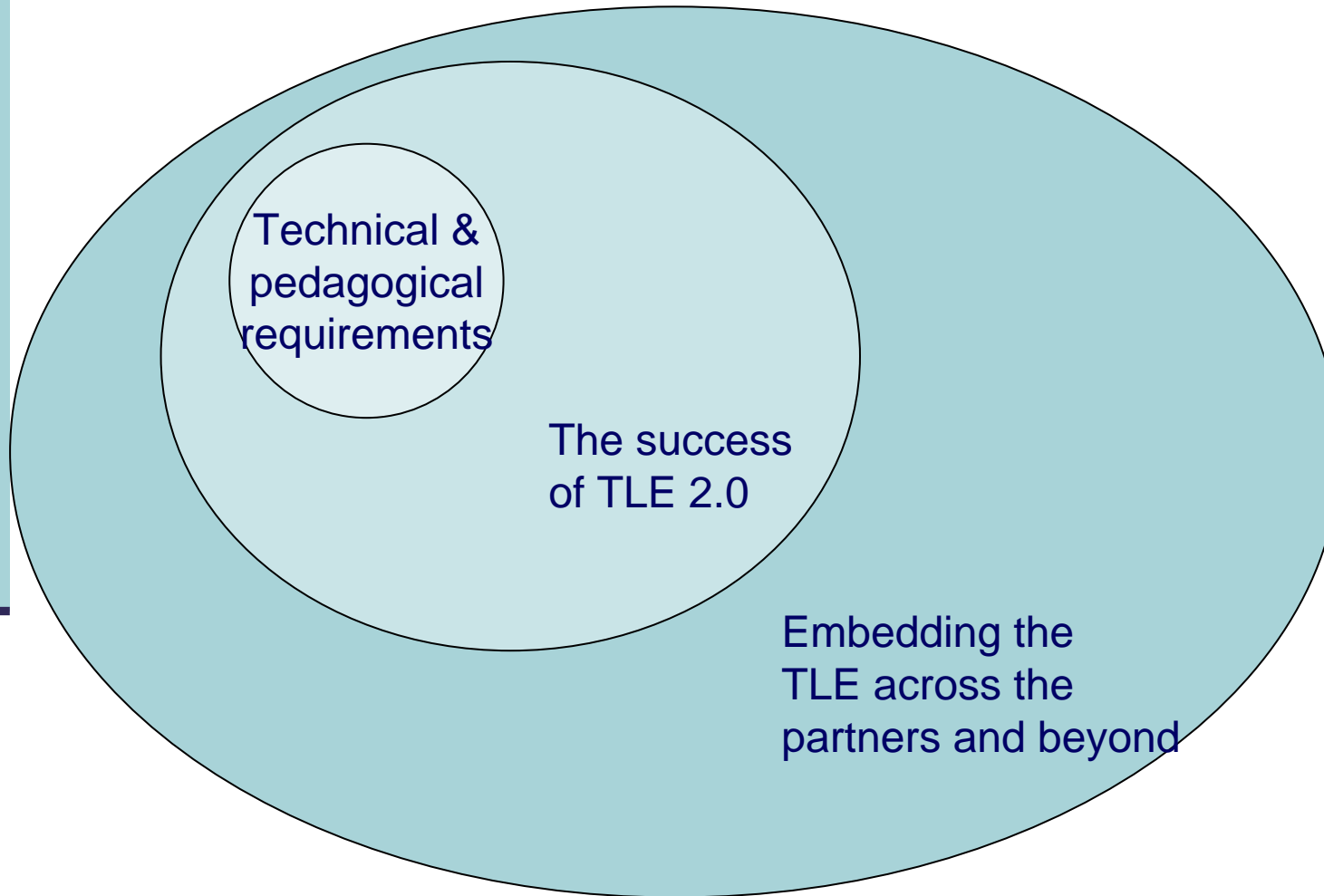
Facilitation and
mediation

Capturing
professional scenarios

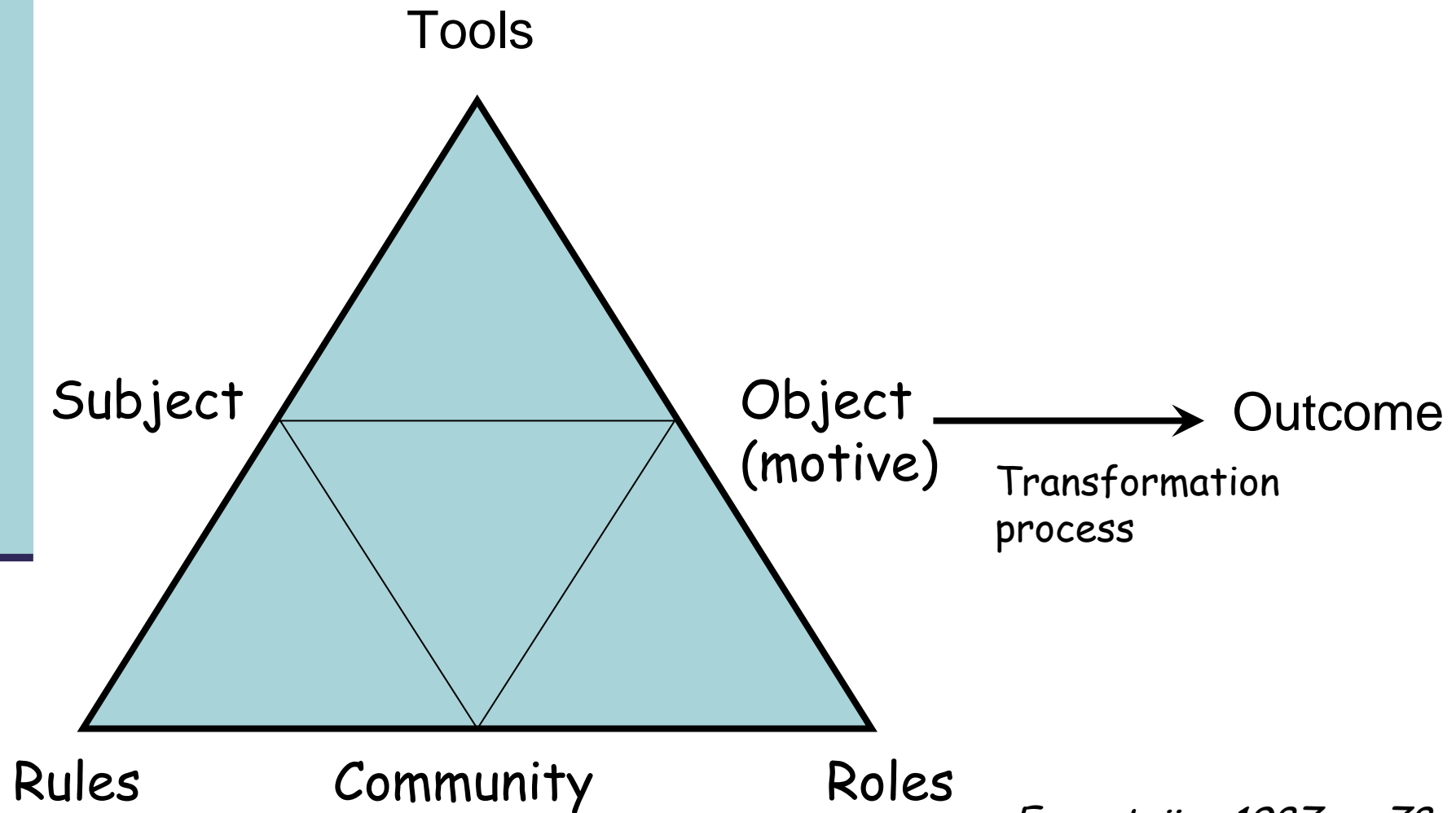
Characterisation



3: Evaluating the TLE

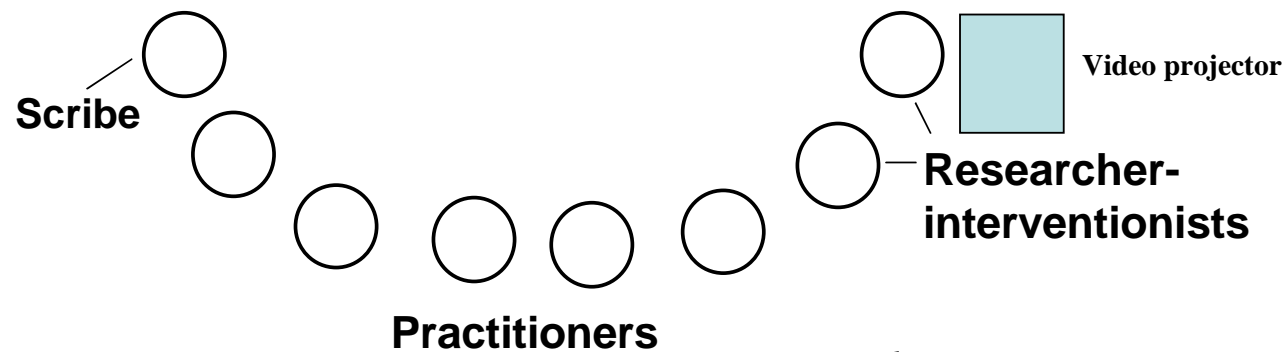
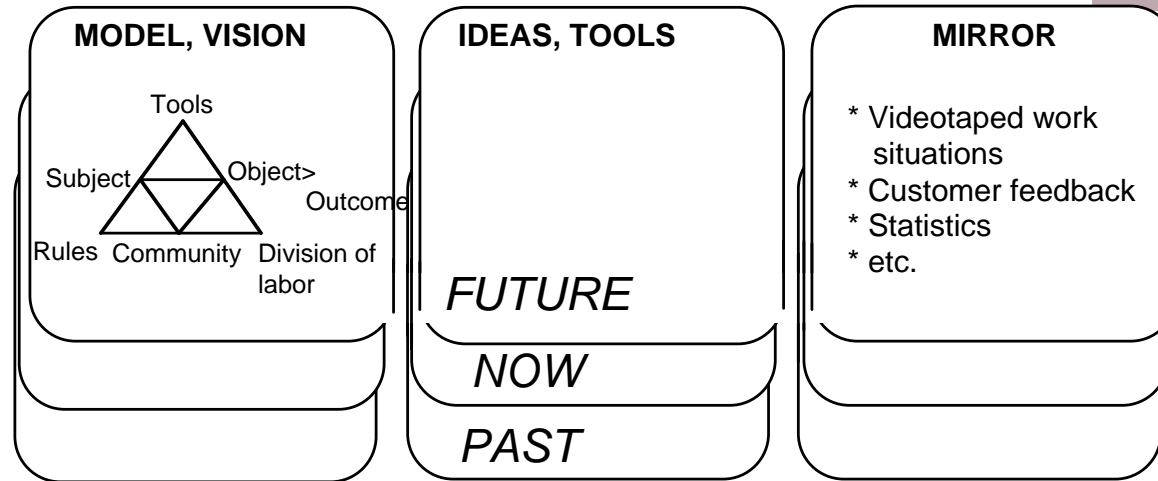


3: Activity theory



Engeström, 1987, p. 78

3: The Change Lab Process



3: Some observations from TLE

- Rolling out and evolving the TLE
- Socio-technical system
 - Re-engineering
 - Building communities
- Tension between
 - narrative and technological requirements
 - change and change
 - (Different communities)
- Iterative and emergent
 - Scenarios, product and embedding

3: Leadership

- Interested, successful, motivated academic or department
- Professional bodies

3: Incentives

- Academic or teaching incentive
- Money
- Profile

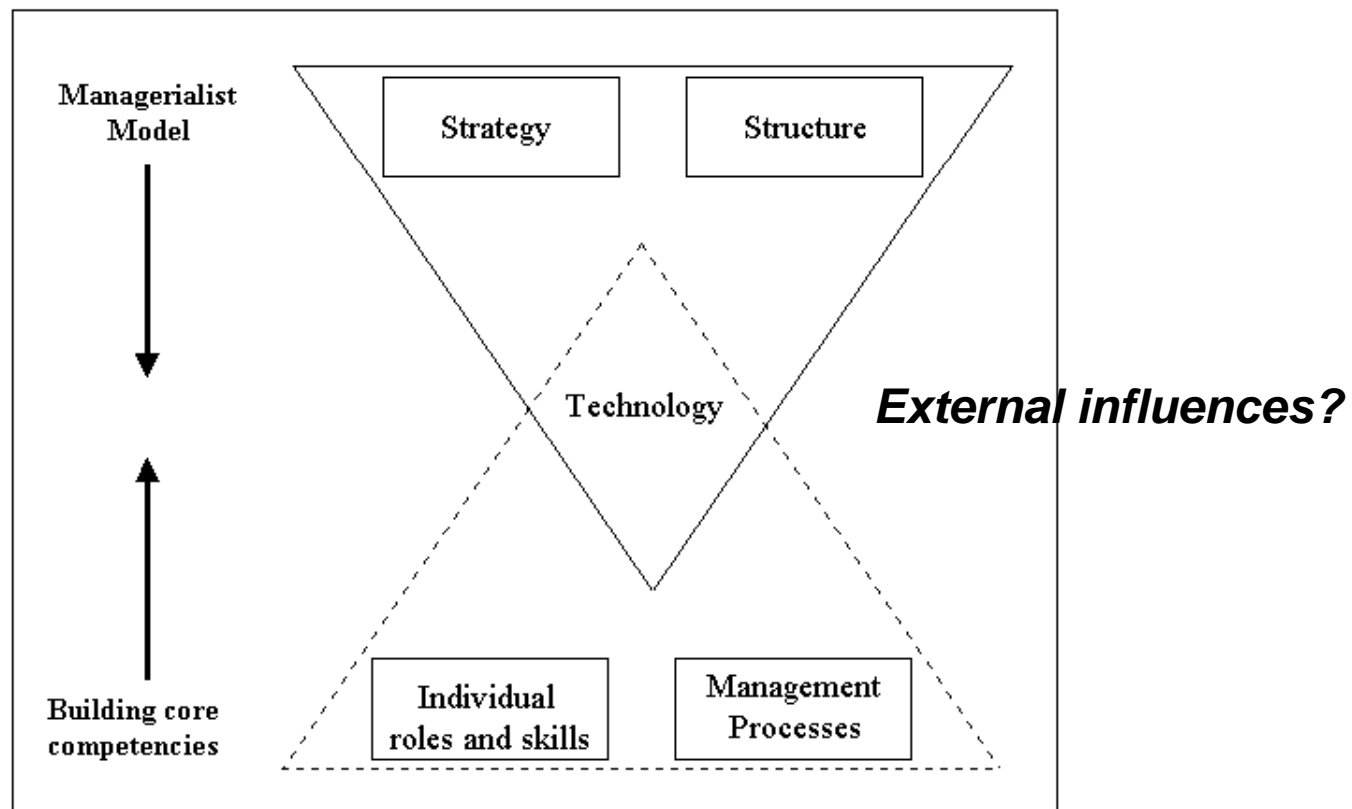
3: Support

- Central services work in partnership
- But tension:
 - May have grown within a department
 - Central services cost
 - Culture clash
- Solution?
 - Local development
 - Central dissemination, feedback loop and applied service research and development
 - Community of Practice

3: Good Practice Advice

- Community generated
 - Community of Practice
 - through wiki?

3: Change management



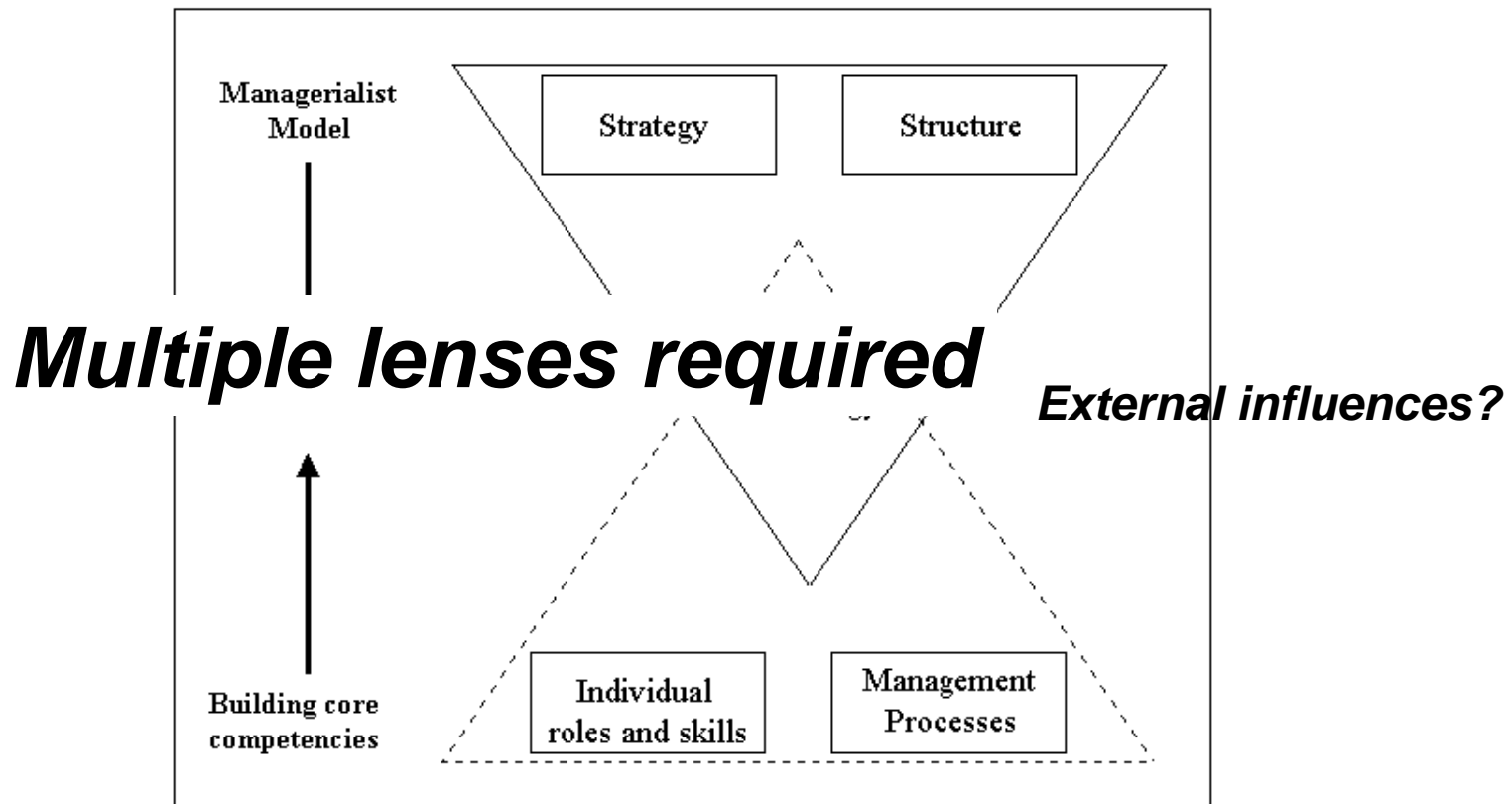
- *Scott-Morton's MIT90's framework - Model of institutional change*
- *Risk Management of e-Learning Project -*
<http://www.insight.strath.ac.uk/projects/risk/index.htm>

3: Change Management

Fullan, 1993, pp.19-41

1. You can't mandate what matters [the more complex the change the less you can force it]
2. Change is a journey not a blueprint [Change is non-linear, loaded with uncertainty and excitement and sometimes perverse]
3. Problems are our friends [Problems are inevitable and you can't learn without them]
4. Vision and strategic planning come later [Premature visions and planning blind]
5. Individualism and collectivism must have equal power [There are no one-sided solutions to isolation and groupthink]
6. Neither centralisation nor decentralization works [Both top-down and bottom-up strategies are necessary]
7. Connection with the wider environment is critical for success [The best organizations learn externally as well as internally]
8. Every person is a change agent [Change is too important to leave to the experts, personal mind set and mastery is the key to the ultimate protection]

3: Change Management



4: Conclusions

- The embedding of the TLE in different environments will produce different socio-technical 'products'
- Tools and choices influenced horizontally and externally
- Activity theory is a useful tool but should be complemented with different lenses
- Evaluation with feedback may provide a powerful tool for driving emergence

Thanks to

- Catherine Owen - REAP/CAPLE
- Michael Coen - REAP/ IRD
- Caroline Breslin - DIDET/Learning Services