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Uncovering the Reality within Software Teams

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Overview

- Introduction
- Virtual Software Teams
- Case Studies
- Research Methodology
- Lessons Learned
- Establishing Virtual Software Teams
- Conclusion

Introduction

- Software development becoming more global
- Outsourcing to third parties
- Setting up subsidiaries
- Complex task
- Transferring local skills to global is not a solution

Virtual Software Teams

- ## Traditional team (Powell et al., 2004)
  - Social group of individuals collocated and interdependent is tasks
  - Activities to achieve common goals
- ## Virtual team (Lipnack & Stamp, 1997)
  - Same goals and objectives as traditional
  - Operate across time, geographical locations and organisational boundaries
  - Linked by communication technologies
- ## Virtual teams in software development environment

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Case Studies

- ## SFT, Ire partnered with Stock Exchange trading, USA
  - Virtual software teams US-Ireland
  - Development and maintenance

- ## Computing US
  - Virtual software teams Ireland-Malaysia
  - Leverage technical ability in Ireland with low salaries in Malaysia

- ## Research based in Ireland

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Research Methodology

- ## Case Study 1 – SFT
  - Action research five-phase cyclical approach
    - Diagnosing, Action planning, Action taking, Evaluation, Specify learning

- ## Case Study 2 – Computing US
  - Participant observational research approach

- ## Content Analysis
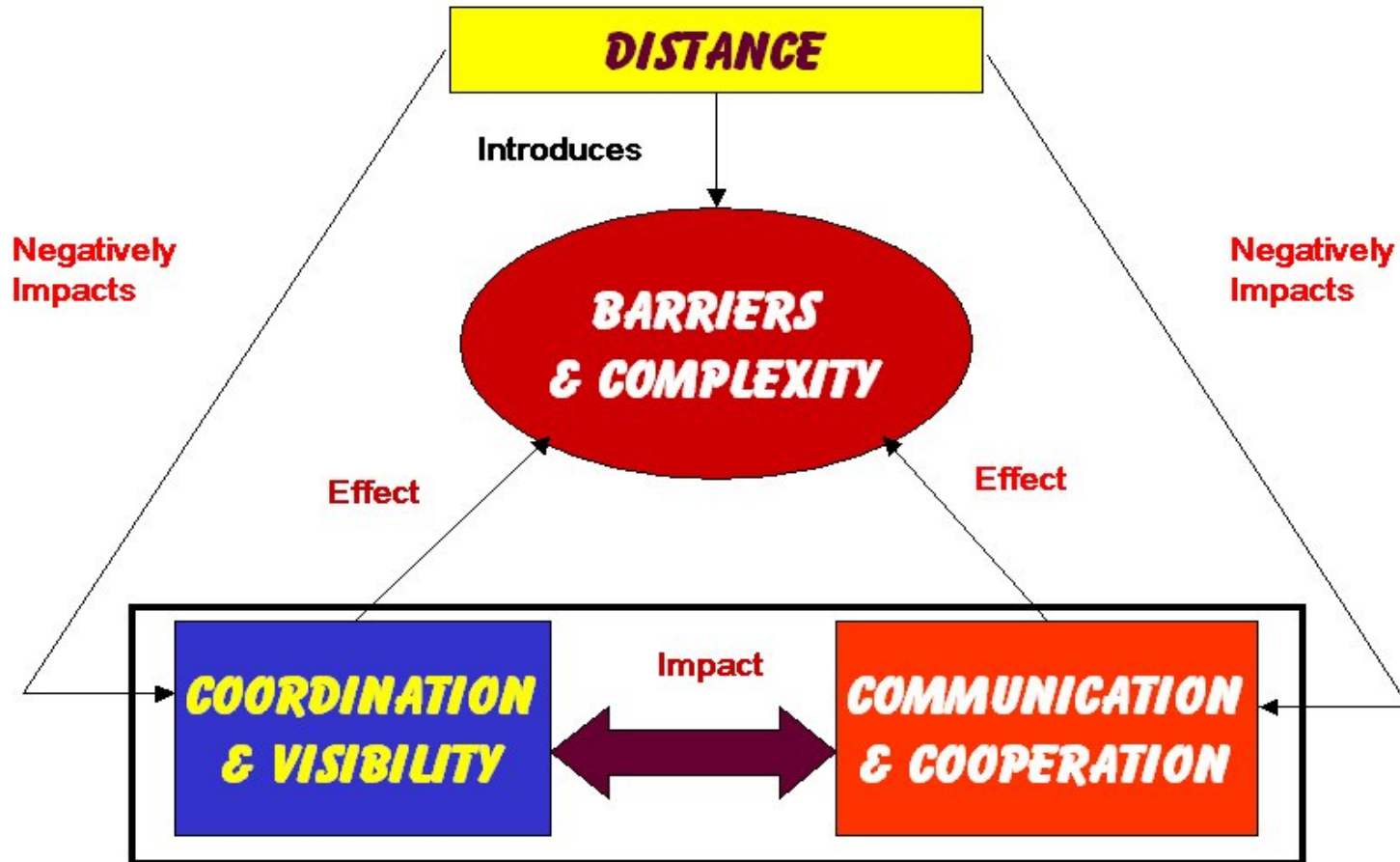
Lessons Learned

- Use of Communication tools
- Project Management
- Process Re-engineering
- Technical Ability and Knowledge Transfer
- Motivational Issues

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- E-mail as a weapon
- Procedure for use of tools
- Underlying problems
  - Distance
  - Lack of informal communication
- Misuse caused
  - Conflict, alienation, mistrust, lack of co-operation

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Project Management

- Virtual team work is not outsourcing with effective partitioning
  - Requires more communication
  - Requires more technical knowledge
- Project management strategy
  - Communication and coordination activities
  - Cultural diversity
  - Visibility into operations

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Process Re-engineering

- Good processes can remove communication requirements
- Establish common goals, objectives, rewards
- Common vocabulary
- Process should have joint ownership

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Technical Ability and Knowledge Transfer

- Should have strategy for knowledge transfer
- Technical ability gave competitive advantage in Ireland
- Lack of experience in Far East
- Irish-based mentors – temporal and communication problems

Motivational Issues

- All team members need to be motivated
- "We versus they" culture
- Fear of losing jobs
- Negative management strategies
- Gives rise to motivational issues
- What are the alternatives?
  - Moving full operation to Far East

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- Document communication procedure
- Project management virtual team software strategy
- Establish common goals, objectives and rewards
- Implement training and mentoring
- Managerial commitment to location

Conclusion

- Factors are 'real' and concern industry
- Future work
  - Measurement of communication
  - Bringing concerns to notice of SMEs
  - Supporting SMEs in developing GSD strategy

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Thank You