

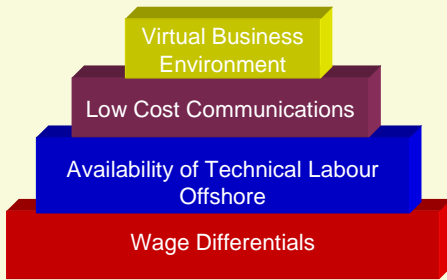


**Dr Val Casey**

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<b>Research Area</b>	Global Software Development (GSD)
<b>Project Title</b>	GSD for Small to Medium Size Enterprises

## Background

- Global Software Development (GSD) is an expanding trend in the software industry today which has been facilitated by the following factors:



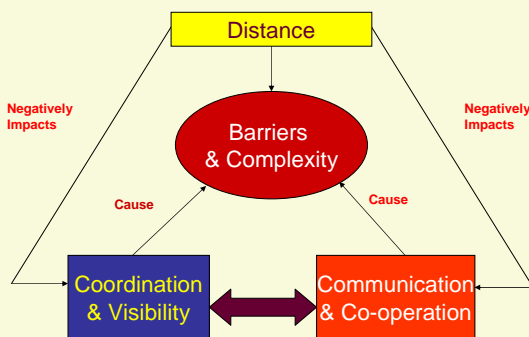
## Virtual Teams

- A popular GSD strategy is the establishment of Virtual teams. These teams normally operate across time zones, geographical locations and organisational or divisional boundaries linked by communication technologies.

## Distance - Virtual Teams

- Four key elements with regard to distance were identified in the context of virtual team operation:
  - Geographical distance introduces physical separation
  - Temporal distance hinders and limits direct contact
  - Linguistic distance limits communication
  - Cultural distance impacts level of cooperation

## Virtual Team Operation



Impact of Distance on Virtual Team Operation

## Three Case Studies

- Three independent case studies** undertaken in the area of virtual team operation in the Irish context over 8 a year period.
- Local offsite software development** - virtual team members which were part of the same organization dispersed between two locations one 150 miles apart in Ireland.
  - Research Methodology - Action Research
- Offshore/nearshore software development** - virtual team members located in the United States and Ireland. The project was a partnership between a US based financial company and the Irish division of a US multinational organization.
  - Research Methodology - Action Research
- Offshore software testing** - virtual team members were geographically, linguistically and culturally distant with members in Ireland and Malaysia. Both sites were part of the same US multinational organization. The Irish division had been the recipient of offshored projects from their US based parent for the previous twenty years and they were now responsible for offshoring part of their work to Malaysia.
  - Research Methodology - Yin Base Case study
  - Incorporated Grounded Theory Based Data Collection and Analysis

## Analysis Of Joint Results

- Based on the analysis of the combined results from the three case studies the outcomes proved to be very similar and included:
  - Communication problems
  - Problems associated with motivation
  - Lack of Trust
  - Coordination issues
  - Ineffective Knowledge transfer
  - Lack of Cooperation

## Key Outcome - Sustained Impact Of Fear

- In addition the analysis of the three case studies identified the fears of those whose work was sent off site, outsourced or offshored as a serious and sustained problem for the successful operation of the respective virtual teams
- Fear was specifically identified as negatively impacting on**
  - Motivation
  - Communication
  - Trust
  - Cooperation
  - Team Building
  - Knowledge transfer