Virtual Team Issues: The New Zealand and Indian Perspective

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INTRODUCTION & BACKGROUND

Virtual teams are defined as groups of geographically, organizationally and/or time dispersed workers brought together by information and telecommunication technologies to accomplish one or more organizational tasks. Typically, team members from different cultures and languages must learn to work together in virtual settings. How workplace issues are communicated, coordinated and controlled across different cultural frames by virtual teams needs to be understood.

New Zealand and India are both exemplars of the emerging global software producer market, but differ in many respects, providing an opportunity for meaningful comparative research. This case study looks at three offshore providers in New Zealand and India to understand the practices associated with the dimensions of culture, communication, coordination and control (CCCC) as they compete as destinations for global outsourcing.

ISSUES OF VIRTUAL TEAMS

➢ **CULTURE** is the unwritten book of rules of the social game that is passed on to newcomers by its members, nesting itself in their minds. It is manifested in both national culture (ethnic group norms, values and spoken language) and organizational culture (system development methodologies and project management practices).

Hofstede's (2005) four cultural dimension indexes are:

Power Distance Index (PDI): The degree to which equal distribution of power is accepted;
Individualism Index (IDV): The degree to which individual or collective relationships are re-enforced;
Masculinity Index (MAS): The degree to which traditional masculine forces are re-enforced;
Uncertainty Avoidance Index (UAI): The level of tolerance for uncertainty and ambiguity.

How do New Zealand and India Compare?

Table 1: Key Cultural Attributes (New Zealand and India)

Key Culture Attributes All these indexes represent relative and not absolute positions of the countries (Done for 74 countries and regions)	Index Score and Global Rank (GR)	
	New Zealand	India
Power Distance Index (PDI)	PDI = 22 GR = 71	PDI = 77 GR = 17 – 18
Individualism Index (IDV)	IDV = 79 GR = 7	IDV = 48 GR = 31
Masculinity Index (MAS)	MAS = 58 GR = 22 – 24	MAS = 56 GR = 28 – 29
Uncertainty Avoidance Index (UAI)	UAI =49 GR = 58 – 59	UAI = 40 GR = 64

Source: Cultures and Organizations – Software of the Mind by Hofstede, G. and Hofstede, G.J.

➢ **COMMUNICATION:** Communication through the electronic media is the core of virtual business relationships. However such technologies are leaner than face-to-face communication (F2F), as they convey a limited set of social cues across different frames of references. Which messaging systems promote higher trust and better social and emotional relationships?

➢ **COORDINATION & CONTROL:** Coordination is the act of integrating each task with each organizational unit, so that the unit contributes to the overall objective. Orchestrating this integration often requires intense and ongoing communication. Control is the process of adhering to goals, policies, standards, or quality levels, through formal or informal methods.

FIELD SURVEY

A field study on three organizations was undertaken to understand the CCCC practices adopted by New Zealand and Indian software providers to compete as a destination for global outsourcing.

Table 2: List of Software Providers Surveyed

		
TECHNET **(Auckland)**	**SYSTEMNET** **(Wellington & Auckland)**	**INFONET** **(Vizac, India & Auckland)**
Employee Strength = 20	Employee Strength = 230	Employee Strength = 170

ANALYSIS OF FIELD SURVEY

A comparison of work practices associated with CCCC dimensions is shown in Table 3

Table 3: Comparison of CCCC practices

Variables	TechNet	SystemNet	InfoNet
Cultural Mix	❖New Zealanders/ European mix. ❖Preference for developers with good interpersonal skills. Certifications are not considered relevant.	❖New Zealanders/ Europeans and Asians/ Indians mix. ❖Preference for developers with good project management skills. Certifications are not considered relevant.	❖Indians (programmers come from India on work permits). ❖Preference for developers with science degrees, strong technical skills and certifications.
Communication	❖Informal ❖Email alone was used in first project, but have now realised the need for a strong client interface. Now regular F2F meetings are held with the client representative.	❖Semi – formal ❖Email, instant messaging, wikis, discussion forums, etc. Use of videoconference facilities mainly by management and generally used for key meetings.	❖Formal ❖Dedicated telephone lines, F2F meetings, email, instant messaging, and use of telephone conferences on a regular basis.
Co-ordination & Control • **Documentation**	❖No documentation.	❖Minimal documentation (earlier an ISO 9001 organization, but felt the documentation required reduced their flexibility).	❖Extensive documentation (as CMM 3 certified organization).
• **No. of Project Status Meetings**	❖None in the first offshore project. Now, weekly or fortnightly F2F meetings are held with the client representative.	❖Depends upon the project team leader – and is project dependent.	❖Weekly/ fortnightly, in a formal atmosphere with project manager, on-site team members and offshore team members.
Organization Culture • **Power Distance**	❖Flat organization – no one is designated team leader.	❖ Fewer levels defined – but a small hierarchy exists within the project groups.	❖Many levels defined (hierarchical and bureaucratic processes).
• **Uncertainty Avoidance**	❖No formal rules are prescribed for project groups. ❖Developers learn new languages and technologies as project progresses. ❖Changes are not documented. Earlier project had encountered ambiguity in source control practices.	❖ Rules are decided by the project manager. ❖ Training given to developers as either developers or project managers. ❖ All changes are placed in a central data repository – no paper documentation used. No minutes taken, unless essential.	❖Rules are laid down in a structured manner. ❖Developers trained in specific project requirements are put on the job. ❖Complete paper documentation of requirements, change proposal, testing conditions, minutes of all meetings, etc.

DISCUSSION

➢ An extension to the cultural variables is shown in the above table, by incorporating organization culture, through practices associated with PDI and UAI. Hofstede attributes national culture to encompass PDI, IDV, MAS and UAI, whereas organizational culture is a subset and is aligned along PDI and UAI.

➢ TechNet and SystemNet were proud of the autonomy given to them while handling their project management activities. Semi-formal and informal means of communication were considered to be assets to the development process, as they did not bring a bureaucratic and hierarchical structure to the organizations. This conclusion can directly be drawn by the fact that the PDI rank of NZ is 71 out of the total 74 positions. Moreover, InfoNet too agreed that formal practices centralize power and bring in a bureaucratic culture, which is in sync with India's PDI rank of 17-18.

➢ InfoNet shows greater UAI for software development practices than NZ, contrary to Hofstede's analysis. This could be due to the fact that InfoNet is a CMM level 3 certified company, which goes through extensive external quality audits, demanding rigid controls with defined statistical measures. Also, embracing such shared rigid practices for software quality and control could be further explained by the collectivist nature of the Indian organizations to bring about collective responsibility and accountability in the software development process.

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