Strategies for Virtual Work

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INTRODUCTION

As capital searches for new markets, greater efficiencies and competitive advantage, time, space and the boundaries of the firm become strategic enablers rather than operational hindrances. Mass customization, the ability to develop and deliver exactly what a customer needs, requires intimacy with their operations and the active participation of customers and customer communities in the design of solutions (Venkatraman & Henderson, 1998). The mobilization and leveraging of knowledge resources to create ideal solutions requires building teams of experts who are motivated, empowered and connected. These experts can be at home, in other offices, in other companies, or in other countries. And the sourcing of assets required to support production and delivery is no longer sacred: complementarity of resources, configured in temporary networks, is sought, even if those resources come from competitors. The solution, the fit for the customer, is the key to success, not the historical reliability of the tried and true business process (Castells, 2001).

Elements of virtuality have existed long prior to the coining of the term, 'virtualization'. Outsourcing of the supply chain, sharing of work amongst distributed participants, forming consortiums, working from home: irrespective of the form, there have been instantiations of the virtual organization or networked enterprise for many years, in some cases, centuries. What is perhaps different today is the widespread conscious characterization of virtual organizing as a firm strategy, where in order to enhance productivity and profitability, the boundaries of the office building, the working day, the company and the nation state have become porous. Further, the information technologies that enable this transformation allow a hitherto unimagined displacement of time and space.

Here we focus upon "virtual work," a term which commonly describes an approach to managing and configuring organizational human resources and work activities beyond the spatial, temporal and legal boundaries of the firm. This "virtual work" runs a spectrum from working-from-home or at a client site to the distribution of discrete parts of the supply chain to anywhere in the world. It is a response to competitive market conditions where customers demand flexibility, responsiveness and high performance. The rapid development of powerful digital communication and collaboration technologies has accelerated the physical distribution of staff and the dispersal of work teams to remote locations where the greatest leverage can be obtained from effort. Virtual working promises many benefits but brings its own set of challenges: the maintenance of control, conformance to organizational goals and performance standards, maintenance of identity and purpose, to name a few. In particular, the problem of creating and using knowledge resources becomes more challenging: how will remote knowledge be integrated into the procedures and folklore of the firm and how will knowledge be located and accessed by remote staff when it is needed?

While there has certainly been an emergent aspect to the virtual organization and its various manifestations, a virtual environment poses greater challenges to effective work than non-virtual and therefore requires special management attention. Therefore, we present a practical framework for the crucial process of envisioning the form of virtual work that a particular organization may require and identifying key objectives and indicators. We show how to map progress towards the required form and degree of virtual work, and how to identify the capabilities necessary to achieve that form. We concern ourselves with those forms of virtual organization that involve remote work within the broadly defined boundaries of a single firm (as distinct from a virtual firm consisting of multiple individual firms). We show how the framework can be used with senior management to conceptualize and guide the process of virtualization at the company.

BACKGROUND

The literature points to five common enabling capabilities for successful implementation of the virtual workplace: leadership and vision, virtual work design, employee skills and characteristics, technology, and economics. They are summarized in Table 1.

A MODEL FOR ENVISIONING VIRTUALIZATION

Managers are required to confront, assess, decide and implement appropriate methods of virtual organizing. Sometimes these processes are strategic, sometimes they are emergent. In either case, information and models are required to assist either in explicit decision-making or the monitoring and evaluation of emergence. In analyzing the information required for effective virtual organizing, there appear to be three classes of information required: information relating to the strategic need of the organization to virtualize in some way,

information relating to the current state of virtualization in the organization, and information about the organizational capability for virtual organizing. Each of these is discussed below, followed by a model that permits evaluation of the alignment of the organization's goals, state and capabilities for virtualization.

Information Relating to the Strategic Need of the Organization to Virtualize

The derivation of an appropriate strategic response to environmental or operational factors can be couched in terms of virtualization. This will depend on the ability of management to understand the potential and relevance of virtuality to solve problems of customer service, competitiveness, efficiency, and employee satisfaction. It would be unusual if a strategic response consisted solely of actions characterized as virtualization. When strategic responses have been articulated and collated, and the consequences have been teased out, then indicators of the nature and extent of envisioned virtualization can be identified. For example, is

Table 1. Enabling dimensions and capabilities for virtualization

Dimension	Attributes	Authors
1. Leadership and vision	Clear vision and purpose of the leader; Leader has attributes which motivate knowledge workers ; Continuously communicates and reinforces a consistent message; Implements effective change management; Builds an environment of high trust; Empowerment of staff, limit command and control	Pan & Scarbrough, 1999; Drucker, 1999; Pfeffer, 1990; Senge, Fall 1990; Bal & Teo, 2000
2. Virtual work design	Well designed and logical; Well documented and available; Roles and responsibilities are defined and clear; Role orientation not job description; Decision criteria are clear; Interdependencies are defined and clear; Timelines and milestones are clear; Process rather than functional orientation; Self-managing teams	Fritz, Narasimhan, & Rhee, 1998; Malhotra, Majchrzak, Carman, & Lott, 2001; Nemiro, 2000; Crandall & Wallace, 1998
3. Employee skills and characteristics	Required skills and competencies are present; Training and advice are available when required to bridge the gap; Measurement of employee performance is transparent and clear; Incentives and rewards are present for good performance; Collaboration is fostered through communities and 'mentors'; Induction explicitly planned for virtual team members.; Flexible, self-motivated, team player	Nemiro, 2000; Venkatraman & Henderson, 1998; Brown & Duguid, 2000; Crandall & Wallace, 1998
4. Technology	Infrastructure is present; Tools are available for collaboration; Tools are available for supporting work processes; Knowledge-based systems are available; The workplace is reflected in cyberspace; Real time information is available	Alavi & Tiwana, 2002; Fritz, Narasimhan, & Rhee, 1998; Yap & Bjørn-Andersen, 2002; Steel, 2003; Malhotra, Majchrzak, Carman, & Lott, 2001
5. Economics	Well thought through and understood; Clear link between economic requirements, drivers and capabilities; Cost / benefit is understood; Commitment to high performance rather than cost cutting	Crandall & Wallace, 1998; Warner & Witzel, 2004

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