Cultural attributes influencing collaborative IT Services delivery

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April 29, 2007

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See: http://itsqc.cmu.edu/downloads
Carnegie Mellon established a services science center, ITSqC, in 2000

ITSqC Research Consortium
- Capability Models
- Certification Program
- Model Validation Research

Center for Service Sciences
- Services Science Research
- Professional Education
  - Executive
  - Graduate

Strategic Service Management Curriculum
- Professional Executive Education
- Graduate Professional Education
  - Service Management Concentration within Masters of IS Management begun in AY 05-06
  - Professional executive education and MS program in development
The world is becoming a service system.

**Top Ten Nations by Labor Force Size**

*about 50% of world labor in just 10 nations*

A = Agriculture, G = Goods, S = Services

<table>
<thead>
<tr>
<th>Nation</th>
<th>% WW Labor</th>
<th>% A</th>
<th>% G</th>
<th>% S</th>
<th>25 yr % delta S</th>
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</thead>
<tbody>
<tr>
<td>China</td>
<td>21.0</td>
<td>50</td>
<td>16</td>
<td>35</td>
<td>191</td>
</tr>
<tr>
<td>India</td>
<td>17.0</td>
<td>60</td>
<td>17</td>
<td>23</td>
<td>28</td>
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<tr>
<td>U.S.</td>
<td>4.8</td>
<td>3</td>
<td>27</td>
<td>70</td>
<td>21</td>
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<tr>
<td>Indonesia</td>
<td>3.9</td>
<td>45</td>
<td>16</td>
<td>39</td>
<td>35</td>
</tr>
<tr>
<td>Brazil</td>
<td>3.0</td>
<td>23</td>
<td>24</td>
<td>53</td>
<td>20</td>
</tr>
<tr>
<td>Russia</td>
<td>2.5</td>
<td>12</td>
<td>23</td>
<td>65</td>
<td>98</td>
</tr>
<tr>
<td>Japan</td>
<td>2.4</td>
<td>5</td>
<td>25</td>
<td>70</td>
<td>40</td>
</tr>
<tr>
<td>Nigeria</td>
<td>2.2</td>
<td>70</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>2.2</td>
<td>63</td>
<td>11</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Germany</td>
<td>1.4</td>
<td>3</td>
<td>33</td>
<td>64</td>
<td>44</td>
</tr>
</tbody>
</table>

The largest labor force migration in human history is underway, driven by urbanization, global communications, low cost labor, business growth and technology innovation.

Source: IBM Corporation, used with permission

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IT-enabled sourcing uses IT as a key component of service delivery or as an enabler for delivering services, e.g:

- Credit card transaction processing,
- Infrastructure support,
- Payroll processing,
- Healthcare benefits enrollment,
- System access/ID verification,
- Medical images interpretation.
The eSCM-SP and eSCM-CL are designed to be complementary Models, addressing both sides of a sourcing relationship.
# Sample of Organizations Involved in eSCM-SP and eSCM-CL

## Client Organizations
- American Express
- BEA Systems, Inc.
- Boeing
- BP
- Carnegie Mellon University
- Children’s Hospital of Pittsburgh
- CIBC
- DaimlerChrysler
- General Motors
- L'Oreal
- Marconi
- Mellon Financial
- PNC Bank
- University of Pittsburgh Medical Center
- Others (under NDA)

## Service Providers
- Accenture
- BearingPoint
- CA
- CEI America
- DBA Engenharia de Sistemas (DBA)
- Deloitte
- Dornier Consulting
- EDS
- Hewlett-Packard
- IBM Global Services
- iGate
- Phoenix Health Systems
- Satyam Computers, Ltd.
- T-Systems
- Others (under NDA)

## Advisors & Consultants
- evolv partners
- Outsourcing Institute
- TPI
- Others (under NDA)

## Standards, Audit & Education
- COPPE, Federal University of Rio de Janeiro
- Federal Government Process Improvement Working Group
- Government Accountability Office (Formerly General Accounting Office) (USA)
- IT Services Management Forum (itSMF-UK & USA)
- STQC

## Evaluation for Certification Authorized Organizations
- COPPE / Federal University of Rio de Janeiro
- Integrated Systems Diagnostics (ISD)
- Trimentus
- Underwriters Laboratories (UL)
eSCM Adoption and Certifications

Adoption activities are underway globally

- Asia Pacific (Australia, China, India, Philippines, Singapore, South Korea)
- Europe (Czech Republic, France, Germany, Netherlands, Portugal, Russia, Spain, Switzerland, U.K.)
- North America (Canada, Mexico, USA) and South America (Argentina, Brazil, Chile, and Costa Rica)

Current Provider Certifications

- IBM Global Services, Strategic Outsourcing, Buenos Aires, Argentina
- Frontline Outsourcing (Asia) PTE LTD, Singapore
- SK C&C, OS Infra Business Division, South Korea
- IBM Global Services India (IGSI), BTO Operations and IBM-Daksh, a wholly owned subsidiary of IBM, (Bangalore), India
- LG CNS Infrastructure Service Center (ISC), South Korea
- Nipuna Services Limited, Hyderabad and Bangalore, India
- Accenture Services Pvt. Ltd., Bangalore, India

Education and training

- Executive education for clients and service providers about models and methods with more than 2000 professionals trained in eSCM-SP in 43 countries as of 2006

Publications and Community Involvement

- More than 25,000 copies of Models downloaded from the web,
- Mapping and measurement technical report downloads exceed 10,000 copies
- Capability determination methods, and data are made available to business communities and researchers via our website (http://itsqc.cmu.edu)
- Addressing needs for co-certification in quality standards community
Early Research about the eSCMs

Case Studies
- Accenture, India
- LG, Korea
- Nipuna (Satyam), India
- Five under NDA

Adoption and impact of best practices capability models for SP and their Clients (Hefley, Hyder, Slaughter, Siegel)

Reducing effort and improving integration for quality diagnostics - comparing results and reuse opportunities between ISO 9001-2000, ISO 20000 and eSCM-SP (Siegel and Hickey)

Other topics
Developing statistical sampling approaches to support large-scale assessment efforts (Northcutt and Paulk)

Pitfalls in statistical thinking for service providers - measuring quality and improvements with appropriate approaches (Paulk, et al.)

Current publications
- INFORMS 2006
- IBM Systems Journal
- Sloan Industry Studies Annual Conference
Case study example

Setting
- Large offshore service delivery center
- Financial and HR services
- Implementation of the eSCM-SP v2 with the goal of achieving an eSCM certification

Research questions
- Implementation outcomes
  - What factors influence knowledge transfer during the assimilation of a capability model?
  - How does the transfer of knowledge affect the timeliness of the assimilation of a capability model?
- Performance outcomes
  - How does implementation of the eSCM-SP impact performance?
  - What categories of performance are affected by the eSCM-SP?

Implementation times were reduced when:
- Team members were more experienced
- Personnel rotated across teams
- Practices were compatible with existing methodologies like CMMI or SW-CMM
Cultural attributes clearly influence IT Service Delivery, but little literature to inform impacted organizations.

Research Objectives:

1. Identification of a comprehensive set of cultural attributes

2. Categorization/creation of a conceptual framework for studying effects of cultural attributes and use of collaborative technologies

3. Design and carry-out case studies of implementations of culturally adaptive technologies to support high quality IT Service Delivery (U.S., Europe, Latin America, and Asia/Pacific).
Distributed work Issues

Strategic issues: when, to whom and how, work allocation.

Communication issues: distance, time zone difference, infrastructure support, distinct backgrounds, lack of informal communication.

Coordination complexity

Cultural issues: power distance, individualism vs. collectivism, attitude towards time

Geographical dispersion: supplier support, access to experts, practices that need face-to-face communication

Technical issues: information and artifact sharing

Knowledge management: slow communication, poor documentation, tacit knowledge, repositories, weak knowledge transfer

Source: adapted from Hefley, Sourcing Management, 2007
Cultural differences

Geert Hofstede (2002) identified five views:
- Power distance
- Collectivism vs. individualism
- Feminity vs. masculinity
- Uncertainty avoidance
- Long-term vs. short term orientation

Edward T. Hall (1976) identifies two dimensions:
- High context vs. low context cultures,
- Poly-chronic vs. mono-chronic cultures.

Source: adapted from Hefley, Sourcing Management, 2007
Important categories of attributes

Relevant cultural attributes observed anecdotally and from literature include:

Organizational: hierarchy, formality, social protocols, work ethic, values

Individual:
- gender,
- geographic locale,
- ethnic membership/identity,
- religion,
- communication skills (verbal and written - which native language)

Technology:
- role/importance of non-verbal cues
- color usage
- physical factors (what can be seen)
- symbols
Communication type:
- Formal: for routine coordination, formal specifications or inspections or meetings.
- Informal: in the face of changes, informally captured requirements or out-of-date documents.

Tom Allen, 1977: The frequency of communication among engineers decreased with distance. Even 30 meters distance (same building or floor) is like miles away.

Some activities (e.g., requirement elicitation) depend more on communication than others (e.g., testing).

Communication patterns: more with local and less with remote people.

Source: Hefley, Sourcing Management, 2007
Sourcing Coordination Trends

Clients tend to pull the outsourcing relationship toward a
- hierarchy structure,
- characterized by informal mutual adjustment

Service providers tend to pull the relationship toward a
- market structure,
- characterized by
  - standards,
  - plans, and
  - formal mutual adjustment.

Source: Hefley, Sourcing Management, 2007

### Communication means

<table>
<thead>
<tr>
<th>Synchronous</th>
<th>Asynchronous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone, video conference, Net meeting, E-chat, Instant Messaging</td>
<td>E-mail, voice-mail, discussion list, on-line calendar</td>
</tr>
</tbody>
</table>

**Synchronous & Asynchronous**

- Document sharing, distributed Configuration Management (CM) systems, file transfer, remote access
- Special tools such as distributed blackboards, intelligent CM systems, experience browser

Source: Hefley, Sourcing Management, 2007
Example of difference in customs

A typical cultural misunderstanding

Nancy: We’re going to have to schedule time for debugging on Saturday.
Vijay: I see.
Nancy: Can you come in Saturday?
Vijay: Yes I think so.
Nancy: That’s great.
Vijay: Yes. Saturday’s a special day, did you know?
Nancy: How do you mean?
Vijay: It’s my son’s birthday.
Nancy: How nice. I hope he enjoys it!
Vijay: Thank you, I appreciate your understanding.

The question is: who will be coming in on Saturday?

Source: Hefley, Sourcing Management, 2007
Source: GARTNER report on change management