Key Trends in Systems Development in Europe and North America

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Systems development directors were surveyed in both Europe and North America to assess key trends in systems development. The survey covered a two-year period -- 1992 and 1993. As we approach the mid-mark of the 90s, development organizations are grappling with the same competitive pressures as their business clients. Additionally, however, development organizations face rapid and discontinuous change in the underlying technologies. As a consequence, those organizations must put in place a set of rapidly configurable tools, technologies, and skills that can aggressively move with the currents of change, deliver value, and ultimately assist the firm in anticipating and seizing competitive opportunities.

Previous research on information systems has focused on critical issues as perceived by information executives, consultants, and academics. (Dickson, et.al, 1984) (Brancheau & Wetherbe, 1987) (Niederman, et.al, 1991). Typically, these studies have focused on one country or area of the world. These has been minimal research done which shows comparative assessments from an international or global perspective on the use of information systems.

This survey of North American and European Information Systems directors identifies new and continuing trends in systems development in terms of tools, techniques, attitudes, and management practices. The results and analysis offer valuable insights into challenges and opportunities relating to systems development across a range of industries.

Systems development managers were surveyed to determine their usage of various development tools, life-cycle techniques, and advanced technologies and platforms. They were also asked for their opinions on a range of systems development topics including: relationship with the overall organization; human resources; methods, tools and productivity; project estimation, measurement and funding; maintenance, systems obsolescence, and systems modernization.

Respondents

Surveys were completed in 1992 and 1993 by 167 systems development executives (120 from North America, 47 from Europe). Of these, 80% in North America and 54% in Europe were the highest ranking systems development executives in their corporation, subsidiary, or division; 75% in North America and 30% in Europe were at the corporate level. The organizations surveyed had average annual revenues of $3.1 billion in North America (ranging to $60 billion) and $5.3 billion in Europe (ranging to $60 billion). The average IS budget was $42.5 million in North America (ranging to $420 million) and $93.3 million in Europe (ranging to $1.1 billion) (see Table 1). The respondents represented a wide range of industries, led by manufacturing in North America (30%) and finance/banking in Europe (33%) (see Figure 1).

Department Profile

On average, systems development departments had 114 systems development personnel in North America and 236 in Europe (see Table 2). Less than half were dedicated to new development, indicating that there is still considerable life in...
existing systems. For those who work on existing systems, roughly twice as many were dedicated to enhancements versus corrections. In North America, 40% of the staff were dedicated to new development, 42% to enhancements of existing systems, and 18% to corrections of existing systems. Europe showed more emphasis on new development: 46% were dedicated to new development, 35% to enhancements and 19% to corrections of existing systems.

Development Projects

The systems development department continues to support a large number of client organizations: 21 on average in North America, and 13 on average in Europe. This suggests a diverse user base that requires development departments to have a broad set of business and technical skills.

The project load was heavy. Last year in the systems development department, on average, 40 new projects were initiated in North America and 44 in Europe. Some 33 projects were completed in North America and 34 in Europe. However, notably fewer were completed on time and on budget. On average, 24 projects were delivered on time and on budget in North America last year and 23 in Europe. One factor could be the apparent inability to cut losses — i.e., abandoned projects. In North America, 83% reported abandoning two or fewer projects. More systems were abandoned in Europe, although it was still a small amount: 83% reported abandoning four or fewer projects.

Applications Portfolio

It comes as no surprise that supporting existing applications continues to be a big job. In North America, the systems development department maintained an average of 92 applica-

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**Table 1: Respondent Profile**

<table>
<thead>
<tr>
<th>Metric</th>
<th>North America</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Ranking Systems</td>
<td>80%</td>
<td>54%</td>
</tr>
<tr>
<td>Development Executive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate Level</td>
<td>75%</td>
<td>30%</td>
</tr>
<tr>
<td>Average Annual Revenue</td>
<td>$3.1 bil</td>
<td>$5.3 bil</td>
</tr>
<tr>
<td>Highest Revenue Reported</td>
<td>$60.0 bil</td>
<td>$60.0 bil</td>
</tr>
<tr>
<td>Average Annual I/S Budget</td>
<td>$42.5 mil</td>
<td>$93.3 mil</td>
</tr>
<tr>
<td>Highest I/S Budget Reported</td>
<td>$42.0 mil</td>
<td>$1.1 bil</td>
</tr>
</tbody>
</table>

* Responses are averages
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