Elements of Portal Project Costs
Integration & Development Strategies, Web & Collaboration Strategies
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FOCAL POINT
Portal project costs vary greatly depending on their scope. Estimating the cost of a portal project requires an analysis of the hardware, software, and personnel costs. Although portal product licenses are often a point of intense negotiations, they account for only a small part of overall project costs.

CONTEXT
Estimating portal costs has proven to be difficult due to wide variance in the scope of portal projects as well as continuing abuse of the word “portal” to describe everything from a Web site with a collection of links to a company’s entire Web presence. After listing all the wonderful things the portal is supposed to do for the organization, the inevitable query of “What is it going to cost?” often elicits blank stares or software-centric estimates from portal vendors.

Portal Pricing Trends
Portal projects include many elements, but portal estimators should concentrate their efforts on scoping out the areas with the greatest variance and greatest overall project impact. Although hardware and software cost can be high (particularly for non-portal software costs such as content management or single sign-on systems), personnel costs account for most of the expense for portals. The areas that have the greatest impact for personnel cost are knowledge organization, administration, business consultants, and integration.

Costs for portal frameworks (i.e., the software infrastructure used to build portals) have continued to decrease dramatically during the past year. Prices have already fallen by more than 75% from the high prices paid by early adopters in 2000. Our research indicates that portal pricing for large enterprises (i.e., those with approximately 10K-50K seats) has dropped by about $10 during the last year to $40-$60 per seat (see WCS Delta 1147). In large business-to-employee (B2E) deployments, Global 2000 organizations are paying less than $20 per seat for up to 100K users. We have seen the first occurrences of less than $10/seat pricing from some vendors for special cases. Portal estimators must keep in mind that the pricing from vendors with little room to shift costs (e.g., Plumtree, BroadVision) tends to appear higher than the pricing from vendors that can shift costs to other parts of the project (e.g., IBM with services and hardware, SAP with ERP), yet total cost may be the same.

As with most other IT projects, personnel-related costs such as systems integration or administration have remained constant and constitute a larger proportion of overall portal project cost. Predicting portal costs (see WCS Delta 1174) requires a detailed understanding of the elements of the project, with a particular emphasis on elements that account for the greatest proportion of overall costs. Our research indicates that two distinctly different types of estimates are useful:

- **Portal product cost**: Estimating cost of products such as Plumtree Corporate Portal or CA CleverPath Portal. These software estimates are useful for bargaining purposes, to ensure that the portal estimator is getting a fair deal from the vendor.

- **Portal project cost**: Estimating the cost of all work and software required to build the desired portal. Portal project estimates are used for budgeting purposes or are combined with business benefit statements to produce a business value justification for management approval (see EBS Delta 1032 and WCS Delta 1002). Indeed, even if a portal project seems like a sure thing, all portal cost estimations should be backed up by business benefit statements to justify the costs.

META Trend: Economic pressures and competitive dynamics will deflate portal pricing and lead to continued market consolidation through 2003/04. By 2005, enterprise application and platform vendors will bundle portal frameworks as part of a broader solution. By 2007, 75% of portal frameworks will be delivered by infrastructure and enterprise application players, with 25% by independent suppliers.
Hardware/Software

- **Additional software costs (high potential cost impact):** The key difference between estimating cost of a portal product versus cost of a portal project is that for a portal project any amount of additional software products may be required to fulfill the overall project vision. Portal projects frequently include related software such as content management, collaboration products, Web single sign-on, search engines, or enterprise application integration. As with upgrading the stock stereo setup in a car, these aftermarket portal enhancements can quickly make the starting list price of a portal look like a pipe dream. Indeed, any of those products can cost as much, if not more, than the portal product itself. Therefore, determining the scope of the portal project is essential for producing an appropriate cost estimate, since the presence of these extra products can increase software costs by 2x-5x. We note that most Java-based portals also require the purchase of application server licenses to run the portal.

- **Portal software license (medium cost impact):** The cost of the portal software itself often receives the most attention, yet it accounts for only about 15% of the overall costs of a portal project. Even without picking a specific vendor, these costs can be estimated by using standard per-seat pricing (see Figure 1).

<table>
<thead>
<tr>
<th>Position</th>
<th>Average Cash Compensation</th>
<th>Fully Burdened Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Java Developer</td>
<td>85.7</td>
<td>137.1</td>
</tr>
<tr>
<td>Project Manager</td>
<td>95.1</td>
<td>152.1</td>
</tr>
<tr>
<td>Infomaster</td>
<td>105.6</td>
<td>169.0</td>
</tr>
<tr>
<td>Web Designer</td>
<td>74.3</td>
<td>118.9</td>
</tr>
<tr>
<td>Windows System Admin</td>
<td>67.3</td>
<td>107.7</td>
</tr>
</tbody>
</table>

*Source: META Group’s 2003 IT Staffing and Compensation Guide*

- **Networking costs (medium cost impact):** Like any other system, a portal consumes its share of network resources and the time of the network administrators. These costs are generally highest for complex situations such as installing new locations or arranging dial-up access.

- **Content subscriptions (low to medium cost impact):** Adding external content to a portal (e.g., articles from magazines and trade journals, AP wire feeds) can improve its freshness and relevance. Customer-facing portals in industries such as health insurance and financial services make frequent use of syndicated content as do some employee portals. Costs vary widely for subscriptions from syndication vendors (e.g., Bloomberg, iSyndicate, Lexis-Nexis), depending on the nature of the syndication (e.g., content directors versus content distributors) and the scope of the articles (see EBS Delta 1008).

- **Server hardware (low cost impact):** Although it is useful to estimate the number of servers for operational planning purposes, we have found that this number has little impact on the overall cost of a portal when compared to much more expensive software and resources. Our research indicates that Unix servers should be budgeted for 25%-100% more than Windows-based servers, depending on the amount of storage (storage costs are fairly equal for the two platforms, so larger amounts of storage equalize the costs) and number of CPUs (higher CPU systems result in a larger Unix differential).

- **Development software (low cost impact):** Portal planners should ensure that some funds are allotted for software that will be installed on the workstations of the portal developers, such as an integrated development environment (e.g., Microsoft Visual Studio, Borland JBuilder), testing tools, or Web design tools. However, these costs will amount to a very small proportion of overall portal project costs for any midsize to large portals (>1,000 seats).

- **Software maintenance (small impact):** Mandatory software maintenance charges generally are 18% for portals, with some reaching 25%. This is not a large cost item, but must be planned for over time.
Personnel

We recommend time-boxing portal projects by selecting a given period of time for implementation (e.g., six months for large portals, three months for small ones) and trying to accomplish as much as possible in that time period. Portals lend themselves well to seamlessly adding new functionality over time, so constituents do not need to worry that features that do not get into the first release will never appear.

- **Content development and knowledge management (high impact):** One of the largest costs for a portal project results from efforts to find and organize the information in an organization so that the portal can consume it. This can include such time-consuming tasks as:
  - Hunting down content repositories across shared drives
  - Interviewing content creators
  - Interviewing owners of information-producing applications to determine how the content is formatted, updated, and stored
  - Creating an organizational taxonomy
  - Categorizing existing content
  - Tuning search engines
  - Training an auto-categorization tool
  - Training knowledge workers on new content tagging procedures.

  If the tasks are already complete or are part of the budget of another project, there will still be a medium impact from the creation and adaptation of content specifically for the portal’s first release.

- **Administration (high impact):** Portal administration tasks include:
  - Installing portlet applications on the portal
  - Defining users and groups
  - Managing access control lists
  - Granting/revoking administrator access
  - Modifying portal layout, managing themes/stylesheets
  - Managing collaboration forums, covering break/fix support (pager)
  - Adding servers to cluster, and portal usage and performance monitoring

  Portal administration roles may be centralized on a “portal team” or distributed to many existing teams. Managing access control lists and managing collaboration forums generally require the greatest amount of ongoing resources.

- **Integration and development (high impact):** Portal project owners should inventory the number and type of applications that will be linked to the portal and the infrastructure that must be integrated. Each application and infrastructure piece that must be integrated will require coding by a programmer who is skilled in that component and trained in the portlet application programming interface. For most portal projects, this work is substantial.

- **Business consultants (high impact):** Portal projects that are considered strategic and transformational in nature often require in-depth, business-level analysis of how the portal will help drive strategic initiatives, transform customer/partner channels, and fundamentally change the way the organization does business. Certainly, not all portals fit into this category. However, projects that involve the first attempt to provide a personalized Web-based view to customers or new supply chain transparency to partners or that represent a first major attempt at knowledge management for employees are candidates for this type of analysis. The reports are usually generated by management consultants (e.g., McKinsey, Booz Allen Hamilton, AT Kearney) and involve a significant amount of interviewing and current-state analysis.

- **Program management (medium impact):** Portal projects are often implemented in a federated model, with a thin centralized “portal team” that has a few dedicated developers (usually consultants from the vendor), which then coordinates and manages the work of dozens of contributors across departments. With this model, the program manager may be the only dedicated long-term portal resource. The program manager often manages many of the introductory portals tasks as well, such as producing the business justification and gathering requirements.
— Training (medium impact): There are four major types of training that must be budgeted for (listed from least impact to most impact):
  – Developers
  – Administrators
  – Portal contributors (power users)
  – End users

Training for developers and administrators is generally provided by the vendor or another third party, while training for portal contributors and end users is generally created in-house or customized from existing training materials. End-user training (for B2E and B2B portals only) helps orient the users to the features of the portal and starts a pattern of behavior that will hopefully encourage regular use of the portal.

Bottom Line

Portal project costs vary greatly depending on project scope. These costs — which include other software and personnel costs — must be distinguished from portal product costs.

Business Impact: Realistic estimates for Web projects will help guide approval decisions and ensure that adequate resources are set aside so that the project is not choked for resources later.