INFORMED OUTSOURCING DECISION MAKING

Company Background

ChevronTexaco is the San Ramon, California-based integrated oil and gas company with 2002 revenues of $91.7 billion and 53,000 employees.

Tool Description

To reduce spending on ==application maintenance,== ChevronTexaco seeks to move work to outsourcing providers in low-cost geographies. The company seeks to prioritize applications that are candidates for outsourcing and focus its initial efforts on those with the highest maintenance cost and the lowest outsourcing risk.

A central team of eight application subject matter experts assess these core applications using a spreadsheet-based scorecard to determine relative outsourcing risks. The scorecard, adopted from BearingPoint methodology, uses objective criteria to measure 43 attributes across two main risk categories:

- *Application Eligibility*—Importance and stability of application functionality

- *Support Readiness*—Maturity of documentation, code quality, etc.

Each attribute is clearly defined on a one-to-five scale to ensure selection based on objective factors.

Having a central team oversee the scoring process helps depoliticize sourcing decisions and ensure comparable scoring across the portfolio.

Intended Audience

Applications executives, CIOs, CFOs, and heads of IT vendor management or procurement.

Implementation Tips

By assigning risk scores and prioritizing potential applications for outsourcing, ChevronTexaco develops a logical sourcing process to ==ensure that its initial outsourcing portfolio has the greatest chance of success== and can serve as a successful foundation for continued migration of support toward low-cost alternatives. Final scores ==assist with both transition time estimation and support-staffing requirements.==

Caveats

ChevronTexaco is early in its migration of maintenance work offshore, so results for this practice are currently inconclusive. However, in the Working Council's review of dozens of offshore decisioning processes, this scorecard emerged as the most sophisticated and objective methodology for identifying and sequencing potential outsourcing risks.

ChevronTexaco's Applications Outsourcing Risk Calculator

Readiness Attributes Adopted from BearingPoint Methodology

Attribute	Elaboration	Score	Criteria	Evaluation
Mission Criticality	*How mission critical is this application to the enterprise? Are there alternative methods to accomplishing these results?*	5	Peripheral	Not that important, or easily replaceable
		4	Some	Somewhat important
		3	Moderate	Important, but replaceable
		2	Critical	Absolutely necessary to the functioning of the enterprise
		1	Lifeblood	The enterprise would fail quickly without this application
Application Stability	*How stable is the application itself? Is this an app that is modified weekly, or an app that has not changed at all in years?*	5	Unchanging	No changes in the last several year
		4	Every Few Years	New version every few years
		3	Annually	New features or bugs fixed annually
		2	Monthly	New features or bugs fixed monthly
		1	Weekly	New features introduced or bugs fixed weekly
Requirements Stability	*In the domain of the application, how often do the requirements change? In other words, if the application could change as fast as the world and underlying technology changes, how fast would it change?*	5	Never	Never changes
		4	Annually	Requirements evolve slowly, with a need for new features annually
		3	Quarterly	Requirements evolve moderately, some new features needed every quarter
		2	Monthly	Requirements evolve quickly, some new features needed monthly
		1	Weekly	Weekly or daily changes, like a Web site
Intellectual Property Value	*What is the value of the underlying intellectual property? If this application fell into the hands of the competition through unscrupulous means, how damaging an effect would it have on the enterprise?*	5	None	Based on commonly held knowledge and technology
		4	Low	A small amount of proprietary intellectual property
		3	Moderate	Some value; a loss if compromised
		2	High	High value; a significant loss if compromised
		1	Extreme	Embodies much of the value of the enterprise
Application Size and Complexity	*How complicated and complex is the application? How long does it take new users to understand it?*	5	Simple	Can be understood in less than a week
		4	Fairly Simple	Can be understood in a few weeks
		3	Moderately Complex	Can be understood in a few months
		2	Complex	Can be understood in a year
		1	Very Complex	Requires years to thoroughly understand

5 = Lowest Risk, Highest Outsourcing Potential.

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ChevronTexaco's Applications Outsourcing Risk Calculator (Cont'd)

Readiness Attributes*

Attribute	Elaboration	Score	Criteria	Evaluation
Portability	*How easily can the environment for the application be replicated somewhere else? Does it require actual connectivity to other systems that cannot be replicated elsewhere? (Also see Application Coupling)*	5	Very Portable	Environment can be replicated in a few hours
		4	Portable	Environment requires a few days of effort to be replicated
		3	Somewhat Portable	Many weeks of effort are required for environment replication
		2	Portable with Difficulty	Many months of effort are required for environment replication
		1	Not Portable	No feasible way of replicating the environment
Data Sensitivity	*How sensitive is the data in the application? If some of the data fell into the wrong hands, how damaging would it be? What would the dollar value of the damage be, in terms of client goodwill, competitive knowledge, or regulatory fines or other issues?*	5	Not Sensitive	Not at all sensitive, even if all the data was compromised
		4	Sensitive	Loss of $100,000–$1 million or equivalent in goodwill or competitive knowledge
		3	Sensitive	Loss of $1–$10 million or equivalent in goodwill or competitive knowledge
		2	Very Sensitive	Loss of $10–$100 million or equivalent in goodwill or competitive knowledge
		1	Extremely Sensitive	Loss of > $100 million or equivalent in client goodwill or competitive knowledge
Application Maturity	*How long has this application been around? Is it a new application development effort, or is it in version five?*	5	Mature	The application is fairly mature with many releases
		4	Multiple Releases	The application has been released more than once
		3	Post Release 1	The application has been released once
		2	Before Release 1	Development has started; application has yet to be released
		1	Greenfield	A new application development effort
Application Coupling	*How tightly coupled is this application to other applications in the portfolio? At how many places is this application integrated to others? Can this application be changed without changing others? Can it be run without running others?*	5	Decoupled	No integration points with other applications
		4	1–5 Integration Points	1–5 integration points
		3	6–10 Integration Points	6–10 integration points with other applications
		2	11–15 Integration Points	11–15 integration points with other applications
		1	> 15 Integration Points	More than 15 integration points with other applications
Process Complexity	*How complex is the process that the application supports? How long does it take to understand the complete process?*	5	Simple	Can be understood in an hour
		4	Fairly Simple	Can be understood in a day
		3	Moderately Complex	Can be understood in a week
		2	Complex	Can be understood in a month
		1	Extremely Complex	Requires a year or more to develop a solid understanding

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ChevronTexaco's Applications Outsourcing Risk Calculator (Cont'd)

Readiness Attributes*

Attribute	Elaboration	Score	Criteria	Evaluation
Regulatory Sensitivity	*How much of an interest do regulatory authorities take in this application? Does the Federal Reserve Board know about this app? Does the data have antitrust implications? Are there tax sensitivities? Does the SEC take an interest?*	5	No Regulatory Issues	No directly applicable regulatory issues
		4	Somewhat Sensitive	There are laws or regulations that apply to this application
		3	Sensitive	There are internal auditors enforcing the laws and regulations that apply to this application
		2	Very Sensitive	Regulatory authorities are aware of this particular application
		1	Extremely Sensitive	Regulatory authorities actively audit the application on at least a yearly basis
Turnover and Retention	*What is the internal turnover rate of the business analysts, developers and IT support who use this application?*	5	< 5%	Less than 5 percent turnover each year
		4	5–10%	5–10 percent turnover each year
		3	10–20%	10–20 percent turnover each year
		2	20–30%	20–30 percent turnover each year
		1	> 30%	More than 30 percent turnover each year
Technology Obscurity	*How obscure is the technology used by this application? Is it common technology that may be slightly outdated?*	5	Standard Technologies	Ex. DB2, J2EE, Solaris
		4	Some Second Tier Products	Ex. uses Sybase
		3	Moderately Obscure	Ex. uses Open VMS
		2	Obscure	Ex. uses POET object oriented database
		1	Very Obscure	Ex. uses Snobol
Business Obscurity	*How unique is the business knowledge behind the application? Is it a commonly understood business outside of ChevronTexaco, or is it arcane?*	5	Common Knowledge	Ex. General ledger
		4	Somewhat Obscure	Ex. Credit card application data entry
		3	Moderately Obscure	Ex. SCADA system
		2	Obscure	Ex. Reservoir simulations
		1	Very Obscure	Ex. Linear programming for an entire refinery
Offshore Policy Constraints	*Are there regulatory or policy reasons that the work could not be offshored? Are there PR reasons that would prevent the offshoring? What are those reasons, and how could they be overcome?*	5	Offshoreable	There are no regulatory or PR obstacles to offshoring
		4	Some Difficulties	There are some regulatory or PR obstacles, but they appear to be surmountable
		3	Difficult to Offshore	There are some significant regulatory or PR obstacles
		2	Very Difficult to Offshore	It appears unlikely that this application can be offshored
		1	Not Offshoreable	This application cannot be offshored

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ChevronTexaco's Applications Outsourcing Risk Calculator (Cont'd)

Readiness Attributes*

Attribute	Elaboration	Score	Criteria	Evaluation
Functional Separability	*How separable are the different functions within the application? For example, could testing be done in a different location than application development? Why or why not?*	5	Separable	There are no obstacles to separating the different functions
		4	Mostly Separable	There are some obstacles to functional separation, but they appear to be surmountable
		3	Somewhat Separable	There are some significant obstacles to functional separation
		2	Difficult to Separate	It appears unlikely that the functions of this application can be separated
		1	Not Separable	The functions cannot be separated
Component Separability	*How separable are the different components within the application? For example, could one component be developed offshore, and another be developed by the existing team? Why or why not?*	5	Separable	There are no obstacles to separate development of the components
		4	Mostly Separable	There are some obstacles to component separation, but they appear to be surmountable
		3	Somewhat Separable	There are some significant obstacles to component separation
		2	Difficult to Separate	It appears unlikely that the components can be developed separately
		1	Not Separable	The components cannot be separated
Decommission Timeframe	*Are there plans to decommission this application? When? Is it likely that the app will be decommissioned at some time in the future?*	5	Unlikely	It is unlikely that this application will be decommissioned
		4	Likely Sometime	Currently no plans to decommission, but it will likely be done in the future
		3	In the Next Few Years	The organization plans to decommission it within 2–5 years
		2	Within a Year	The organization plans to decommission it within a year
		1	Immediately	The application is planned for elimination
User Support Volume	*How frequent are the user support calls? Are there many calls every day or only an occasional call every few weeks?*	5	< 1 Call Per Week	Fewer than one call per week
		4	1–4 Calls Weekly	1–4 calls per week
		3	1–9 Calls Daily	1–9 calls daily
		2	10–99 Calls Daily	10–99 calls daily
		1	100+ Calls Daily	Hundreds of calls daily

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ChevronTexaco's Applications Outsourcing Risk Calculator (Cont'd)

Transition Attributes*

Attribute	Elaboration	Score	Criteria	Evaluation
Application Development Skills	*How skilled are the software developers, management team, testers, and other professionals that work on this application?*	5	Minimal	Improvement required to meet average skills level for a non-software company
		4	Weak	Average for a nonsoftware company
		3	Solid	Above average for a nonsoftware company
		2	Strong	Comparable to a typical software product company
		1	Very Strong	Comparable to the skills of the software industry leaders
Product Manager	*Is there someone who is tasked with managing the requirements, with determining what is to be done for the current release, and what should be left for future releases?*	5	Strong Prod. Mgr.	Stron g product manager who actively manages application requirements
		4	Prod. Mgr.	Someone has the responsibility, but not all the authority
		3	Partial Prod. Mgr.	Someone has part or most of the responsibility
		2	Shared	Multiple people share responsibility for the requirements
		1	No Prod. Mgr.	Responsibility for requirements is spread among many individuals
End-to-End Project Manager	*Is there a single individual responsible for project management of the end-to-end process, with authority over all the analysts, developers, testers, and everyone involved? Is project management done by the development lead, or by an independent project manager?*	5	Strong Proj. Mgr.	Strong project manager dedicated to this effort
		4	Proj. Mgr.	Someone has the responsibility, but not all the authority
		3	Partial Proj. Mgr.	Responsibility is covered by development lead
		2	Shared	No end-to-end project management; responsibility is shared
		1	No Proj. Mgr.	Project management responsibilities is spread among many individuals
Quality Manager	*Is there a single individual responsible for software quality for this application? Is there a team dedicated to Software Quality Assurance (SQA)?*	5	Strong Qual. Mgr.	Strong quality assurance manager and SQA team
		4	Qual. Mgr.	QA manager and team in place, but they do not possess all the authority
		3	No Independence	An SQA team and manager exist, but they report to the development lead
		2	No SQA	The test team is managed by the development lead, or lacks experience in testing
		1	No Testing	Testing is done on-the-fly by users or developers
Integrated Project Team	*Is there an integrated, dedicated project team? Do the testers know the developers on the team? Are most people dedicated from start to finish on this application?*	5	Integrated Team	An integrated, dedicated project team
		4		
		3	Dedicated Team	Team is dedicated for the project, but managed separately
		2		
		1	No Integrated Team	Team members are rotated in and out as needed

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Transition Attributes*

Attribute	Elaboration	Score	Criteria	Evaluation
Steering Committee	*Is there a steering committee? Does it have representatives from software engineering, IT support, SQA, business analysis, customers? Does it meet frequently? Does it resolve issues? Is it effective?*	5	Effective	Exists, meets monthly, effectively resolves all issues
		4	Mostly Effective	Exists, meets monthly, effectively resolves most issues
		3	Somewhat Effective	Exists, meets less than monthly, many unresolved issues
		2	Not Effective	Exists, but either lacks appropriate personnel, or is unable to resolve open issues
		1	No Steering Com.	No steering committee exists
Requirements Management	*Are the requirements kept up-to-date with the changes in the software? Are the other artifacts kept consistent with the requirements? Are requirements analyzed for quality? Are requirements configuration controlled? Do developers review the requirements?*	5	Well Managed	Up-to-date consistent requirements, quality reviewed and controlled
		4	Managed	Managed and controlled, but somewhat out of date
		3	Poorly Managed	Managed, but out of date or not controlled
		2	Not Managed	Requirements completed, but not updated
		1	No Requirements	Requirements need more detail to be complete
Build Frequency	*How often are new builds of the entire application made? Is the build procedure completely automated?*	5	Quarterly	Builds are made less often, or integration is not completed until the end
		4	Monthly	Builds are made monthly
		3	Weekly	Builds are made weekly
		2	Two to Three Times/Week	Builds are made two or three times per week
		1	Daily or Better	Builds are made at least daily; the build process is automated
Release Frequency	*How often are new releases of the entire application made available to stakeholders, including customers?*	5	When Complete	Application only released when finished
		4	Semi-Annually	Releases made available semiannually
		3	Quarterly	Releases made available quarterly
		2	Every Six Weeks	Releases made available every six weeks
		1	Every Two Weeks	Releases made available every two weeks
Configuration Management	*Is all code configuration managed? Are all other artifacts configuration managed? Is it easy for developers to retrieve the latest version of the code? Is it easy to understand what has changed?*	5	All Controlled	All artifacts controlled; easy to access latest configuration. Easy to understand
		4	Mostly Controlled	Most artifacts controlled
		3	Some Controlled	Code is controlled, but nothing else
		2	Little Control	Some code is controlled
		1	None	Currently no configuration management process in place

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ChevronTexaco's Applications Outsourcing Risk Calculator (Cont'd)

Transition Attributes*

Attribute	Elaboration	Score	Criteria	Evaluation
Project Estimation	*Are there estimates? Are estimates documented, including underlying assumptions? Do affected groups and individuals agree to the commitments?*	5	Well Managed	Well documented with assumptions; those affected agree to commitments
		4	With Assumptions	Tasks have estimates and assumptions; no commitment from individuals
		3	Complete	Tasks have estimates, but no assumptions behind them
		2	Incomplete	Estimates for some tasks
		1	No Estimates	Estimates were not made for most tasks
Project Planning	*Is there a written plan for the application? Is it up-to-date? Is it detailed enough? Is it configuration controlled? Are tasks and responsibilities established? Are resources and funding provided?*	5	Good Planning	Written, detailed, up-to-date plan, with tasks, responsibilities, and resources
		4		
		3	Some Planning	Written plan, not up to date, and lacking detail
		2		
		1	No Planning	No written plan
Project Transparency and Tracking	*Are actual results and performance tracked against the plan? Are the results public, for all stakeholders to see? Are corrective actions taken and managed to closure?*	5	Well Managed	Up-to-date tracking, with corrective actions; transparent for everyone
		4	Managed	Up-to-date tracking; either nontransparent or no corrective actions in place
		3	Tracking	Up-to-date tracking; nontransparent and no corrective actions in place
		2	Some Tracking	Some tracking, but not up to date
		1	No Tracking	No tracking of actions against plan
Software Quality Assurance	*Are all builds tested? Are all artifacts reviewed by SQA? Are results reported to the software project group?*	5	Solid SQA	All builds tested, all artifacts reviewed, everything reported
		4		
		3	Some SQA	Not all builds tested; not all artifacts are reviewed
		2		
		1	Little SQA	Minimal testing and review is incorporated into the current SQA process
Business Reviews	*Does the business customer periodically review the progress of the application?*	5	Good Bus. Rev.	Frequent business review
		4	Solid Bus. Rev.	
		3	Some Bus Rev.	Occasional business review
		2	Little Bus Rev.	
		1	No Review	The business customer does not review the product until delivery

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Transition Attributes*

Attribute	Elaboration	Score	Criteria	Evaluation
Technical Architecture	*Is there a technical architecture? Is it written? Is it up-to-date?*	5	Good Tech. Arch.	Good, up-to-date written technical architecture
		4		
		3	Tech. Arch.	A written technical architecture exists, but it is either not up to date, or lacking in quality
		2		
		1	No Tech. Arch.	No documentation on technical architecture
Operational Maturity	*How mature are the operational processes for this application? Are the batch jobs automated? Are there manual processes involved?*	5	Mature	Managed by exception; rich operational dashboards
		4	Strong	Mostly managed by exception; some dashboards
		3	Intermediate	Mostly automated; some automated monitoring
		2	Weak	Some automated processes; some manual processes
		1	Very Weak	Few automated processes; active monitoring required
Production Environment Stability	*How stable is the production environment? Are backups and other maintenance performed? Is the production environment outsourced?*	5	Stable	Production environment changes annually or less frequently
		4	Strong	Production environment changes quarterly; formal maintenance process exist
		3	Intermediate	Monthly changes in production environment; formal maintenance process exists
		2	Weak	Weekly changes in production environment; on-the-fly maintenance process
		1	Unstable	Daily changes in production environment
End User Support Maturity	*How mature is the support for end users? Are there multiple levels of support? Are there tools supporting the people?*	5	Mature	At least three levels; scripts and other tools supporting the technicians
		4	Strong	At least three levels of support
		3	Intermediate	Two levels of support
		2	Weak	One level of support; no supporting tools
		1	Immature	Support provided by developers
Configuration Management Tool	*Is a tool used for configuration management? Which tool? Does everyone know it? Does everyone use it?*	5	Widely Used	Everyone uses the tool
		4	Some Use Tool	Some usage, but not widespread
		3	Weak Tool	Weak or antiquated tool used
		2	Tool Not Used	Tool selected, but not currently used
		1	No Tool	Currently no configuration management tool has been implemented

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Attribute	Elaboration	Score	Criteria	Evaluation
Requirements Management Tool	*Is a tool used for organizing and documenting the requirements? Which tool? Does everyone know it? Does everyone use it?*	5	Widely Used	Everyone uses the tool
		4	Some Use Tool	Some usage, but not widespread
		3	Weak Tool	Weak or antiquated tool used
		2	Tool Not Used	Tool selected, but not currently used
		1	No Tool	Currently no requirements management tool has been implemented
Defect Tracking Tool	*Is a tool used for defect tracking? Which tool? Do testers use it? Do developers use it? Do analysts use it?*	5	Widely Used	Everyone uses the tool
		4	Some Use Tool	Some usage, but not widespread
		3	Weak Tool	Weak or antiquated tool used
		2	Tool Not Used	Tool selected, but currently used
		1	No Tool	Currently no defect tracking tool has been implemented
Automated Testing Tool	*Is a tool used for automated testing, or are all tests done by hand? Which tool or tools? Are they actually used? On every build?*	5	Widely Used	Everyone uses the tool
		4	Some Use Tool	Tool used infrequently for some tests
		3	Weak Tool	Weak or antiquated tool used
		2	Tool Not Used	Tool selected, but currently used
		1	No Tool	Currently no automated testing tool has been implemented
Automated Make Tool	*Is a tool used for automated builds? Which tool? Is it used for every build?*	5	Widely Used	Tool used for every build created
		4	Some Use Tool	Tool used for some builds
		3	Weak Tool	Weak or antiquated tool used
		2	Tool Not Used	Tool selected, but currently used
		1	No Tool	Creation of builds is currently not an automated process

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