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Chevron: Outsourcing Commodity Processes in a Commodity Business

Cynthia M. Beath and Jeanne W. Ross

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CISR Working Paper No. 371

Title: **Chevron: Outsourcing Commodity Processes in a Commodity Business**

Author: **Cynthia M. Beath and Jeanne W. Ross**

Date: **June 2007**

Abstract: Faced with a large number of impending retirements, Chevron intended to downsize by outsourcing commodity services. In 2004 management recognized that taking advantage of the growing number of services available on the market required new competencies. This case describes how Chevron learned to identify appropriate outsourcing opportunities and how the IT unit—and managers of IT-enabled processes—incrementally built skills around architecture, integration, and vendor management to enable the company to benefit from outsourcing opportunities.

Keywords: outsourcing, commodity process, IT product management

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Chevron:
Outsourcing Commodity Services in a Commodity Business

In 2004, Chevron (CVX), the world's fourth largest publicly traded energy company, was continuing to hone its strategic capabilities and enhance its competitive positioning in a commodity-based, volatile, global marketplace. To that end, Don Paul, Vice President and Chief Technology Officer at Chevron, talked about the need to outsource "commodity" activities and divert resources to activities of higher value:

> *"The more you keep, the less you get to develop. In order to go to the next generation issues that are going to drive your performance in the future, you have got to decide what things are really being commoditized. You can get rid of them. You don't have to do them anymore. You only have to manage them."*

For Chevron, outsourcing was a natural response to an aging workforce. The anticipated retirements of half its workforce over the next decade presented not only a challenge, but also an opportunity. The firm was mobilizing younger workers worldwide, but it was also looking to become leaner and more focused. Cost containment was an important driver in this commodity firm. Moreover, the maturation of some service markets meant that some services that had traditionally been internally provided could now be purchased externally. The migration toward greater use of external services involved important choices about which services to perform internally and which to outsource. Increased outsourcing would also necessitate changes in the firm's core competencies:

> *"The fundamental role for large companies is architecture and integration. There are lots of choices on the sourcing of the components, but you wouldn't outsource the ability to integrate them because that's, arguably, what you actually do—you integrate finance, technologies, operations and markets. So, I think you have to be careful that what you outsource is well-defined components—things that can be described and bundled—so that you can do the integration. That part we will do. That's where the value is. You have to give up the management of the parts in order to devote your energy to the management of integration."* —*Don Paul*
> *Vice President & Chief Technology Officer*

Executives at Chevron relied on a number of characteristics to identify those components best

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suited to outsourcing: "stable," "routine," "generic," "legacy," or "noncomplex;" "riskless, secure or securable"; "very clear metrics exist for it"; "widely used," not "a niche business"; not "unique" (relative to their competitors) or "proprietary" (even though it might be mission critical); "something we could live with" (as opposed to what we most want); "does not require face-to-face interaction—phone or email will do"; "does not require knowledge of this business"; "multiple companies compete to supply it"; "switching costs are low—you can swap one out and plug another one in." They often boiled these characteristics down to one word: *commodity*.

Despite these clear statements of what to outsource, CVX management found that choices of what to outsource, how to outsource and to whom to outsource were not obvious. They hoped to leverage early outsourcing experiences to help them select activities for outsourcing and establish effective outsourcing relationships. The goal was to closely manage things that were changing, while outsourcing things that were not changing:

> *"You have to move the talent base to be involved in the critical technology sphere, to drive the change. You recognize that there are a lot of unknowns. It doesn't mean you don't have a road map in the general sense that you're going this way and not that way, but the fact is, most of what you need to know is down the road and you don't know it. You must be opportunity driven and flexible as those opportunities materialize."*
>
> *—Don Paul*
>
> *Vice President & Chief Technology Officer*

Company Background

Chevron's roots dated back to 1879, when the Pacific Coast Oil Company was formed just north of Los Angeles. In 1936, Chevron joined forces with Texaco, which had been established in 1901 in Beaumont, Texas, to create Caltex, an oil company specializing in the Asian, South African and Australasian markets. In 2001, Chevron, Texaco and Caltex merged. As of 2004, the combined enterprise, which was called "ChevronTexaco" for a few years, had operations in more than 180 countries, some of them in the most remote parts of the world imaginable:

> *"We're intrinsically global and have been so for very, very long periods of time, more than most industries. In fact, our retail operations in Brazil are 90 years old. We've operated in Indonesia since the 1930s. We've been in Africa for 50 years. In many of these places we are, in effect, the infrastructure. In many places we have to bring our stuff with us, because there is none. You know, people say 'international' and most vendors you talk to in the IT business think 'Europe.' It's not. International is Kazakhstan, where you have to supply the railroads and the water as part of your operations."* *—Don Paul*

At the end of 2003, CVX held oil and gas reserves of approximately 12 billion barrels and produced 2.5 million barrels of oil and gas equivalent per day. It owned or franchised 21 refineries and 24,000 retail outlets and employed more than 50,000 people worldwide. In 2003, net income was $7.2 billion, resulting in 15.7% return on capital employed, and a total stockholder return of 35.2% (see Exhibit 1). CVX had led their three largest competitors in stockholder return for four years. While most of the firm's revenues and profits resulted from its petroleum business, CVX was also developing advanced energy technologies, such as fuel cells, hydrogen storage, and nanotechnologies.

As a vertically integrated energy company Chevron encompassed both upstream (exploration and production) and downstream (refining and sales) operations, as well as a variety of chemical product lines (see Exhibit 2). Downstream operations had been traditionally organized around geographies, but in 2003, both refining and marketing had been reorganized around global functions. The new downstream organization structure was expected to improve financial performance by exploiting synergies and reducing costs. As one financial manager

put it, "There's a tremendous push to reduce costs. This is a very cost-focused industry."

IT at CVX

CVX management viewed IT as an important tool for both cost control and market innovation. The company's exploration activities relied on complex modeling and analytic systems. Pipelines, refineries and retail outlets all demanded real-time automation. In addition, an increasingly integrated value chain drove the need for integrated information systems and a global IT architecture.

To meet the needs for cost control while acknowledging the unique information technology needs of its different businesses, Chevron's IT function had a federal structure. Application development and support groups were located in the operating companies, reporting to business unit managers. These groups, encompassing approximately half of CVX's IT professionals, were responsible for applications, information management, and infrastructures that were business specific.

CVX's remaining 1200 IT professionals were part of CVX's central IT organization, the Information Technology Company (ITC), headed by ITC President Gary Masada. Masada, who reported to Don Paul, the Chief Technology Officer, supervised two main units. ITC's Delivery group, under Brenda Mize, provided global infrastructure and support services—mainframe, network, server and desktop support—as well as enterprise-wide applications. ITC's Strategy group, headed by Alan Nunns, focused on strategic planning, communications, metrics, ITC performance reporting, capability management, contract management, and product planning. Both Nunns and Mize sat on the CIO Council with Gary Masada and the business unit CIOs (representing upstream, downstream, and corporate). The Council worked to ensure alignment of ITC services with enterprise and business unit objectives (See Exhibit 3).

Chevron's diverse business units had similarly diverse information technology requirements, but the firm's increased emphasis on cost controls and strategic integration bolstered ITC efforts to introduce and manage firm-wide technology standards. In 1997, ITC had successfully implemented a global desktop environment. Referred to as GIL—Global Information Link—the PC project had introduced a single desktop image and standard linkages to related IT capabilities. Other key infrastructure offerings included global network services and mainframe and server operations. Over time, ITC had assumed responsibility for enterprise applications, most notably SAP. By 2004, SAP consumed approximately one third of ITC resources.

The ITC offered its services to the business units as a set of 200 IT "products." CVX business units paid for the services they used. They were not required to purchase ITC's services, but most did, especially domestically. Product managers reporting to Alan Nunns "owned" an IT service or a set of services such as network products, GIL (desktop services), high-bandwidth access, or server management. Each product manager was responsible to customers for defining and pricing secure, reliable, and flexible services. To do this, product managers forecasted and tracked product demand and actual costs (to provide or procure the service) using sophisticated asset management and activity based costing systems, a great deal of interaction with customers, and external benchmarking comparisons. Product managers promoted ITC's products and services in user-friendly brochures (see Exhibit 4).

The product management structure helped ITC define service levels and set prices that were competitive with the external market. Most ITC products were provided inhouse by Brenda Mize's Delivery group, but several major products, including telecommunications and mainframe services, had been outsourced. Consequently, almost a third of the ITC budget was for outsourced services.

IT Outsourcing at Chevron

Chevron had a variety of experiences with IT outsourcing. In one of its earliest deals, Texaco had outsourced desktop support services to an established vendor in a five-year contract in 1992. From early on, the vendor claimed to be losing money on the deal, while on the Texaco side, complaints were high. Several units defected from the agreement. Nevertheless, optimistic that both sides had learned how to make the arrangement work, Texaco signed a new five-year contract with the vendor in 1997. Also in 1997, Chevron outsourced mainframe services and domestic telecommunications to EDS. The global nature of CVX's business, rapid innovation in networking technologies, and inadequate refresh and upgrade requirements in the contract led to a belief that managing this capability was strategic, and eventually spelled the demise of the telecommunications deal. (The windfall acquisition of a strong telecommunications unit in the merger with Texaco significantly reduced the risk of making this change.) Nevertheless, the mainframe services part of the deal was renegotiated (and much more completely specified) in 2002. In addition to outsourcing these IT operational responsibilities, ITC had successfully used offshore developers on two very large projects.

These and other early outsourcing experiences helped CVX clarify when and how to outsource. They described three areas in which they had acquired valuable learning:

1. Identifying a commodity service
2. Defining service metrics
3. Enabling business change

Identifying a Commodity Service

CVX was focused on outsourcing commodity activities to generate cost benefits. Alan Nunns noted that CVX wanted to outsource services that "somebody else can do better and cheaper because of scale or geography—on a sustainable basis." Management anticipated that cost advantages could arise from labor arbitrage—typically by moving offshore—or from leveraging knowledge across accounts:

> *"Any time you can leverage not only commonly available skills sets, but also processes or tools, then I think there's a distinct advantage to outsourcing."* —*Marc Coventry*
> *Network Product Manager, Global Technology & Strategy*

CVX observed that some services looked like commodities but proved not to be. Telecommunications was an example:

> *"In some parts of the world where we operate, there is no global telecom by anybody's normal definition. So when you go out to Sprint or AT&T or whatever and say we need global telecom, they say 'sure.' Then you sit down and you say, 'Well there are these big holes in your plan, you know.' So, I think telecom is a great example of where you wouldn't have guessed that we would have to be back in the telecom management business, but we are."*
> —*Don Paul*
> *Vice President & Chief Technology Officer*

CVX came to think of its integrated global telecommunications management capabilities as a unique competency that could not be readily outsourced. ITC found some components of their telecommunications services portfolio that could be outsourced (e.g., operations and maintenance of dispersed network components or engineering and deployment of specialized equipment), but they elected to retain integration responsibility. Instead of outsourcing integration to a Tier 1 supplier, some services were provided in-house, some were outsourced, some were co-sourced and some were provided directly to ITC by firms that might otherwise have been subcontractors or Tier-2 providers to a Tier-1 supplier.

Similarly, when CVX managers were assessing whether to renew and expand the Texaco desktop contract in 2002, they expected that desktop vendors would bring best practices to the table thereby offering significant cost advantages. What they found was that desktop services was a mix of routine activities (e.g., imaging hundreds of machines a year, distributing re-released software) and more creative

work related to trouble-shooting, problem solving and experimenting with new technologies. Rather than introduce a broad suite of best practices, vendors tended to tailor processes to their customers' preferences. The customization enabled a vendor to accommodate unique business demands, but it eliminated the potential for cost advantages from economies of scale. As a result, CVX decided to retain a prior relationship that Chevron had with Compucom for desktop break-fix (viewed as a true commodity service), while discontinuing Texaco's full-scale desktop outsourcing arrangements.

Defining Service Metrics

Early on, CVX management recognized that ITC's product management discipline offered significant advantages when negotiating outsourcing contracts. CVX's awareness of its own service levels and costs helped negotiators specify costs and metrics. But CVX thought it risky to outsource services before best practices had emerged:

> *"Take the case of wireless LAN. The security layer, which is very important to us, was the primary driver for keeping wireless LAN in-house. A lot of folks were doing security the way the supplier, Cisco or Nortel, would tell you to do it, but it was insecure and we knew that. So we developed an architecture to ensure that wireless LAN was secure. We locked it down, got rid of the rogue access points, came up with a good security architecture and deployed it. Now we've learned a lot about it and we've got our arms around it. I think we can confidently sit down with a supplier and negotiate what we really need and I'm sure there will be suppliers out there that can do it."* —*Marc Coventry*
> *Network Product Manager, Global Technology & Strategy*

In some cases, it made sense to co-source an activity to acquire knowledge about new technologies or processes. But CVX management resolved that, wherever possible, they would develop a competence internally prior to outsourcing it:

> *"Our view is you only outsource those things that you have done yourself. You're doing that for two reasons. One is if you don't know what you're doing then you're completely at the mercy of whoever you pick and you may not even pick somebody better. The second thing is you must always have the threat of re-internalizing it. Your key leverage over suppliers is the fact that you can internalize it or at the very least, you can give it to somebody else. But to be able to do that, you need to have enough knowledge to know how to do the activity."*
> *—Don Paul*
> *Vice President & Chief Technology Officer*

Ensuring Innovation

In early outsourcing deals, CVX had looked for ways to ensure innovation on the part of its vendors. Their large contracts, however, established metrics around costs and service levels in a way that proved to be a disincentive to vendor innovations. EDS's managers, for example, were rewarded for selling new business. Thus, they were motivated to provide thought leadership prior to the contract signing, or for service add-ons to existing contracts. But there seemed to be no effective incentives for delivering innovation that would improve service delivery or thought leadership that could impact service delivery after the contract was signed.

Management sensed a fundamental misfit between EDS's incentives and CVX's expectations for innovation. A key IT objective was to enable the company to seize business opportunities created by new technologies. Recognizing that outsourcers could not know CVX's business well enough to take responsibility for identifying the business opportunities of new technologies, CVX adjusted its expectations for vendor innovation. They noted that specialist firms could be expected to find benefit in staying current in the technologies they specialized in:

> *"We have some providers who really do stay 'out there'—not on the leading edge necessarily, but way ahead of where we are going to be, in terms of keeping people*

trained and up to date. They can pretty quickly swap in different skill sets to meet business demand." —Dennis Bourque
Manager, Supplier Alliance

At the same time, ITC would need to continuously develop talent capable of applying those vendor innovations to business needs:

"The strategic skills sets, those that we want to invest in, recruit, develop, maintain, and grow are the technology futurists, CVX business experts, the program managers, data architects, and application architects—those who know how to marry business requirements and our architecture. Those give us competitive advantage over others in the marketplace." —Rob Plath
Systems Support, ERP Center of Excellence

In summary, the lessons CVX learned from its early outsourcing experiences highlighted the value of accessing the specialized talents of vendors but retaining responsibility for integrating those talents in ways that benefited Chevron. (See Exhibit 5 for ITC's strategic staffing model.) This approach to technology innovation suggested limits to the scope of outsourcing deals:

"[The vendor says], 'If I am going to save you money, I've got to make system changes and business process changes. If you only give me half the levers, I can't do it. I can't save you the most money, if I can only change one piece, so give it all to me.' We finally concluded we wouldn't want to give everything to one company because of the control they would have over our business. There is risk in doing that. Yes, there are interface issues to work out, but you don't want to give away the strategic planning of how you approach your systems or applications infrastructure." —IT Manager, Finance

Three Sourcing Decisions

The lessons from IT outsourcing were applied not only to ITC decisions but also to functional area decisions about IT-enabled business processes. Three sourcing decisions addressed in the early 2000s applied CVX's outsourcing principles.

1: Accounts Payable Business Process Outsourcing

In 2003, CVX's financial accounting managers decided that business process outsourcing might solve some of their workforce demographic challenges. The firm had already centralized much of its transaction-oriented financial accounting into three regional shared services centers (two in the U.S., one in Asia). If some Accounts Payable transaction processes such as invoice processing were outsourced, their relatively experienced staff could do more analysis and less routine processing. In addition, they expected that they could achieve a step-wise reduction in their labor costs if they could move invoice processing offshore.

CVX managers felt that invoice processing had many characteristics of a commodity process. Several large vendors offered similar, standardized services focused on routine transaction processes, most of which were embedded in software. Most of the processes were specified by generally accepted accounting principles (GAAP) and little, if any, business specific knowledge was required. However, none of the vendors had established processes for Sarbanes-Oxley compliance:

"We would meet with potential offshore outsourcers and we would say, 'What's your compliance program like? How do we work with each other on quarterly or monthly closing of the books? How do you certify to us the controls you're going through?' We didn't get a lot of answers. It was more like, 'Whatever you'd like us to do, we'll find a way to do it.' That was the answer. 'We will do whatever you want' was nice, but not completely comforting."
—IT Manager, Finance

Given the lack of Sarbanes-Oxley expertise, CVX managers were quite concerned about the effort it might take on their part to bring about a speedy financial close if this work were outsourced. They were also concerned that outsourcing might reduce their grasp of the data.

The Finance IT Manager noted that CVX was "a company that feels strongly about compliance, controls, integrity and understanding what you manage."

Consequently, even though invoice processing was largely routine work, CVX chose not to outsource it. Instead, they moved the service to an existing CVX financial services center in Manila. By moving the work to Manila, CVX expected to reap many of the advantages of lower cost labor while not losing control over their financial closing processes or their compliance with Sarbanes-Oxley requirements:

> *"The things that outsourcers are able to do, we can do. And, you know, frankly, the labor arbitrage is really the only big opportunity that we saw out there and we're capturing that."* —*Mark Humphrey*
> *Vice President and Comptroller*

2: Call Center Outsourcing

CVX operated a call center to assist its retail credit card customers. CVX had long regarded a major portion of this call center as a non-strategic but unavoidable cost. Starting in the dot-com era, the call center began to experience very high turnover, which led to higher costs, degradation in service and some customer dissatisfaction. CVX's call center services had much in common with call centers across a variety of industries. Thus, outsourcing, and in particular, offshore outsourcing, looked like a way to reduce costs while simultaneously increasing service levels.

Prior to making an outsourcing decision, Carol O'Keefe, the Customer Services Manager for Credit Card Enterprises, led a team to specify, in excruciating detail, the scripts and processes that the call center agents were to follow, as well as the processes by which those scripts and processes would be changed in the future. They engaged consultants to advise them about call center best practices as well as the regulatory and audit requirements for credit card call processes. They also worked with ITC's global network architects and information protection experts.

Once the business processes were completely specified and documented, O'Keefe found that the most structured and programmable call routines could be easily distinguished from those that were more complex or more high-risk. CVX designed a system that brought all calls in through a telephone switch and then, based on the customer's account number, the choices the customer made in the IVR phone tree, and certain account information obtained from the company's databases, automatically routed the call. Routine calls could be routed to an outsourcer (using Voice over IP technology), while complex calls could go to a small internal call center that handled higher risk calls. Having identified the part of call center services that qualified as "commodity," CVX contracted with an outsourcer in Manila to handle the routine calls:

> *"In the Philippines, this is a sought-after position for mid-level professionals. The stability that you get with this workforce, versus the churn, churn, churn, and the cost of that churn in terms of training and inconsistency with the customer, along with the labor arbitrage, has a high value."*
> *—Carol O'Keefe, Customer Services Manager for Credit Card Enterprises*

The outsourcing reduced turnover, cut costs, extended service hours and enhanced service quality. The outsourcing arrangement allowed CVX to own the routing and agent procedures and the associated training materials, while the outsourcer owned all the personnel management procedures. An elaborate, technology-enabled quality assurance system (purchased separately by CVX) was used to assess service levels and contract compliance.

3: Application Development and Maintenance

In the early 1990s, CVX began replacing dozens of legacy applications with enterprise systems such as SAP and JD Edwards. When those implementations were substantially complete, the firm established a shared Center of Excellence in domestic application support, staffing it with 400 people, many of whom had worked on the SAP implementation project.

This group helped the business units make best use of existing SAP functionality, added functionality by writing additional reports or extracts, and modified SAP parameters where there were problems. Many applications staff remained in the business units, and they attended to the development of other division-specific support needs. Mainly to leverage scarce resources, but also to reduce the cost of application support services, CVX looked into moving offshore some of its SAP, JD Edwards and GIL (ITC's desktop-image) support activities. This move was in line with ITC's strategic staffing model (See Exhibit 6).

Although CVX had a rigorous project methodology, ITC leaders estimated that CVX was CMM level 2. Potential outsourcers were level 5. CVX wanted to leverage the offshore vendors' project management and programming expertise. The impact of moving from CMM level 2 practices to CMM level 5 practices would be massive organizational change. Rob Plath noted, "The work will be more disciplined, there will be more documenting, it will feel more bureaucratic." But the benefits CVX would derive from increased discipline were significant:

> *"We will also have a greater ability to maintain compliance with company policies that speak to documentation, information protection, things that Sarbanes-Oxley is asking industry to do now. There will be a greater ability to understand our service levels and where the real demand is through that documentation. So the underlying sets of documentation and work capture and the greater discipline will enable us to manage our business more effectively. We'll have better root-cause analysis, better decision making."* —Rob Plath
> *Systems Support ERP Center of Excellence*

A unique challenge in moving application development and maintenance support offshore was extracting tasks that were not wholly "owned" by individual employees. CVX wanted to outsource the "commodity" portion of jobs that tended to have both routine and problem-solving or analytical elements:

> *"Every single one of the 400 people in Mary Neff's [SAP Center of Excellence] organization is giving up parts of their work. You might be giving up 10 to 15%; you might be giving up 50%."* —Rob Plath

But Application Development and Maintenance—particularly as it related to SAP—was a competence that CVX could not sustain. SAP support was an area where a vendor would clearly benefit from staying abreast of technology changes. And CVX could benefit from its vendors' innovations:

> *"The vendor has had to remain up to speed with SAP. They have had to install the latest releases. As new things come out, they have to learn them. What we have tended to do when SAP came out with a new release was to do what are called "technical upgrades," because nobody wants to have to train a user to do something different, or change a business process. Whenever you start changing processes, upgrading becomes expensive. So, although we are on version 4.6B or 4.6C, depending on which functional area we are talking about, our design is more like 2.1, because that's what our people know, the 2.1 version of SAP. We are looking at a fancier screen, but we are not using the new capability. We are using a 1993 version of Financials. In HR, we are probably at a 1999 version, and downstream order-to-cash stuff is, I guess, a year or so old. So, that's fairly recent, but it's layered on top of this 1993 Finance design. Already we have an upgrade that is scheduled for this year, and the vendor is already saying, 'Do you mean that you are going to spend all this money and not get any benefit?' The vendor wants to share some areas with us where they think that we can get some quick wins."*
> —Tom Guyette
> *Project Manager, ERP Center of Excellence*

The labor arbitrage was so significant, and the outsourcers' programming and project management capabilities were so pronounced that

CVX decided to engage in offshore outsourcing contracts with two Indian outsourcing firms. CVX intended that offshore projects would be staffed by a mix of CVX and vendor personnel, with the mix and the level of teamwork varying throughout the project life cycle. (See Exhibit 7 for the proposed division of labor on a project.) Over time, CVX planned to outsource half of the work of the center of excellence, with 70% of the outsourced work completed offshore. The remaining 30% of the outsourced work would take place on-site, to facilitate coordination between CVX and vendor efforts. As a result of the outsourcing, CVX expected to obtain higher quality SAP and software engineering services at a fraction of their current cost, as well as some local process improvement.

Leveraging Outsourcing Learning

By 2004, Chevron had in place a number of governance mechanisms to support outsourcing initiatives. For example, its company-wide project management and change management process called CPDEP—Chevron Project Development and Execution Process—provided a systematic five-step framework for making and executing sourcing decisions. This methodology had a long history in CVX, having been used to manage projects ranging from drilling wells to relocating offices. Key individuals sat on Decision Review Boards responsible for assessing the projects at each step. Much of the learning from prior outsourcing decisions resulted from the overlapping memberships of Decision Review Boards. Senior level managers brought to bear their experience on prior decisions and their understanding of related business and IT projects in the implementation of each new project.

To further formalize the relationship management process at CVX, Dennis Bourque took on the role of Head of Sourcing. Chevron had hundreds of third-party providers, but about a dozen of them accounted for 85% of the ITC's outsourcing contracts. Bourque watched over all those relationships. He also participated in monthly meetings of Alliance Improvement Teams (AITs) for each vendor. The AITs, consisting of equal numbers of high-level CVX and vendor executives, had primarily strategic responsibilities, including developing an annual business plan, resolving disputes, conveying critical business information, reviewing performance metrics and savings, and considering new initiatives. AITs also considered problems escalated by Local Alliance Improvement Teams. LAITs were responsible for local oversight of contract provisions for a particular segment of a vendor contract (e.g., of an application, a particular service or for a business unit) and they met weekly or bi-weekly. Each LAIT was chaired by a contract management specialist and included the vendor's account and delivery managers, as well as representatives from CVX's enterprise and business IT groups.

Governance efforts were focused on not only improving individual outsourcing experiences but also ensuring that CVX's individual outsourcing deals manifested a high-level coherence:

> *"I have concerns that as you pursue outsourcing options, you have the potential of undermining integration benefits. I think we're on a good path here and we're making some good decisions about what we're keeping in-house and what we're outsourcing. You know, our functions like finance, IT, HR and procurement, have to have some kind of cohesive view of the future. Historically in our company, we've been very functionalized. Finance has a mission, and IT has a mission and HR has a mission and everybody is trying to do the best thing for their function, but what we want to insure is that at the end of the day all the pieces fit together in some kind of meaningful way. And the Decision Review Board membership and close communication across those teams is part of making that jigsaw puzzle fit together."*
>
> *—Mark Humphrey*
> *Vice President and Comptroller*

Going Forward

To provide coherence across their systems initiatives and to build and leverage a solid

platform of applications and information for future business opportunities, ITC was leading an enterprise architecture development initiative, called the "Everest Project." The Everest Project assessed system requirements across business units to identify shared service requirements. ITC had traditionally relied on subjective judgments as to what IT products would be most useful to the business. The Everest Project was intended to provide strategic direction in developing new services:

> *"We've done a very good job of putting our infrastructure together, but really, the vision for the applications layer should be driving what's available from the infrastructure. There's a dialog and a collaborative process and we work very closely with those folks, but, at the end of the day, I think what's going on in projects like Everest, will drive what happens at the infrastructure layer."*
>
> *—Marc Coventry*
> *Network Product Manager,*
> *Global Technology & Strategy*

As Alan Nunns explained, one benefit of this initiative would be to clarify some sourcing issues:

> *"We need our overall business operations architecture to be defined. It will help us figure out what service components make sense relative to our needs and our geographic distribution."*

Mark Humphrey emphasized that there were limits on what the firm would outsource. CVX would not hold onto commodity processes, but it would retain control over any process that might need to respond to changes in the business:

> *"The outsourcers would of course argue that they are better positioned to respond to major changes in the business. The whole argument for outsourcing is 'variable-izing your cost.' If you are in a downsizing mode or ramp-up mode, you can adjust your staffing immediately. Well, that's all well and good, but part of dealing with business change is having the capability, what we call 'organizational capability' to respond to change, which means knowing something about the business. We have gone through major, major change over the last five years, especially with the merger and ERP systems implementations. Were it not for some pretty seasoned knowledgeable people, knowledgeable and experienced in our business and our company, we would not have done what we were able to do and I feel passionate about that statement. Insourcing 'maintains our ability to respond to the business.' We have been there in terms of helping manage the changes and also been there in terms of driving costs out. I don't see a third party provider doing that as well as we have done it.*
>
> *—Mark Humphrey*
> *Vice President and Comptroller*

Exhibit 1: Chevron Consolidated Statement of Income
(2003 ChevronTexaco Annual Report)

Millions of dollars, except per-share amounts

	2003	2002	2001
REVENUES AND OTHER INCOME			
Sales and other operating revenues	$120,032	$ 98,691	$104,409
Income (loss) from equity affiliates	1,029	(25)	1,144
Gain from exchange of Dynegy preferred stock	365	—	—
Other Income	335	247	692
TOTAL REVENUES AND OTHER INCOME	121,761	98,913	106,245
COSTS AND OTHER DEDUCTIONS			
Purchased crude oil and products	71,583	57,249	60,549
Operating expenses	8,553	7,848	7,650
Selling, general and administrative expenses	4,440	4,155	3,984
Exploration expenses	571	591	1,039
Depreciation, depletion and amortization	5,384	5,231	7,059
Write-down of investments in Dynegy Inc.	—	1,796	—
Merger-related expenses	—	576	1,563
Taxes other than on income*	17,906	16,689	15,156
Interest and debt expense	474	565	833
Minority interests	80	57	121
TOTAL COSTS AND OTHER DEDUCTIONS	108,991	94,757	97,954
INCOME BEFORE INCOME TAX EXPENSE	12,770	4,156	8,291
INCOME TAX EXPENSE	5,344	3,024	4,360
NET INCOME BEFORE EXTRAORDINARY ITEM AND CUMULATIVE EFFECT OF CHANGES IN ACCOUNTING PRINCIPLES	$ 7,426	$ 1,132	$ 3,931
Extraordinary loss, net of tax	—	—	(643)
Cumulative effect of changes in accounting principles	(196)	—	—
NET INCOME	$ 7,230	$ 1,132	$ 3,288
PER-SHARE AMOUNTS			
BASIC:			
NET INCOME BEFORE EXTRAORDINARY ITEM AND CUMULATIVE EFFECT OF CHANGES IN ACCOUNTING PRINCIPLES	$ 7.15	$ 1.07	$ 3.71
Extraordinary item	—	—	(0.61)
Cumulative effect of changes in accounting principles	(0.18)	—	—
NET INCOME	$ 6.97	$ 1.07	$ 3.10
DILUTED:			
NET INCOME BEFORE EXTRAORDINARY ITEM AND CUMULATIVE EFFECT OF CHANGES IN ACCOUNTING PRINICIPLES	$ 7.14	$ 1.07	$ 3.70
Extraordinary item	—	—	(0.61)
Cumulative effect of changes in accounting principles	(0.18)	—	—
NET INCOME	$ 6.96	$ 1.07	$ 3.09
*Includes consumer excise taxes:	$ 7,095	$ 7,006	$ 6,546

Exhibit 1 cont'd: Chevron Consolidated Balance Sheet (2003 ChevronTexaco Annual Report)

Millions of dollars, except per-share amounts

	At December 31	
	2003	2002
ASSETS		
Cash and cash equivalents	$ 4,266	$ 2,957
Marketable securities	1,001	824
Accounts and notes receivable (less allowance: 2003—$179; 2002—$181)	9,722	9,385
Inventories:		
Crude oil and petroleum products	2,003	2,019
Chemicals	173	193
Materials, supplies and other	472	551
	2,648	2,763
Prepaid expenses and other current assets	1,789	1,847
TOTAL CURRENT ASSETS	19,426	17,776
Long-term receivables, net	1,493	1338
Investments and advances	12,319	11,097
Properties, plant and equipment, at cost	100,556	105,231
Less: Accumulated depreciation, depletion and amortization	56, 018	61,076
	44,538	44,155
Deferred charges and other assets	2,594	2,993
Assets held for sale	1,100	—
TOTAL ASSETS	$ 81,470	$ 77,359
LIABILITIES AND STOCKHOLDERS' EQUITY		
Short-term debt	$ 1,703	$ 5,358
Accounts Payable	8,675	8,455
Accrued liabilities	3,172	3,364
Federal and other taxes on income	1,392	1,626
Other taxes payable	1,169	1,073
TOTAL CURRENT LIABILITIES	16,111	19,876
Long-term debt	10,651	10,666
Capital lease obligations	243	245
Deferred credits and other noncurrent obligations	7,758	4,474
Noncurrent deferred income taxes	6,417	5,619
Reserves for employee benefit plans	3,727	4,572
Minority interests	268	303
TOTAL LIABILITIES	45,175	45,755
Preferred stock (authorized 100,000,000 shares, $1.00 par value; none issued)	—	—
Common stock (authorized 4,000,000,000 shares, $0.75 par value; 1,137,021,057 shares issued)	853	853
Capital in excess of par value	4,855	4,833
Retained earnings	35,315	30,942
Accumulated other comprehensive loss	(809)	(998)
Deferred compensation and benefit plan trust	(602)	(652)
Treasury stock, at cost (2003 – 67,873,337 shares; 2002 – 68,884, 416 shares)	(3,317)	(3,374)
TOTAL STOCKHOLDERS' EQUITY	36,295	31,604
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 81,470	$ 77,359

Exhibit 2: Organization Structure of ChevronTexaco in 2004

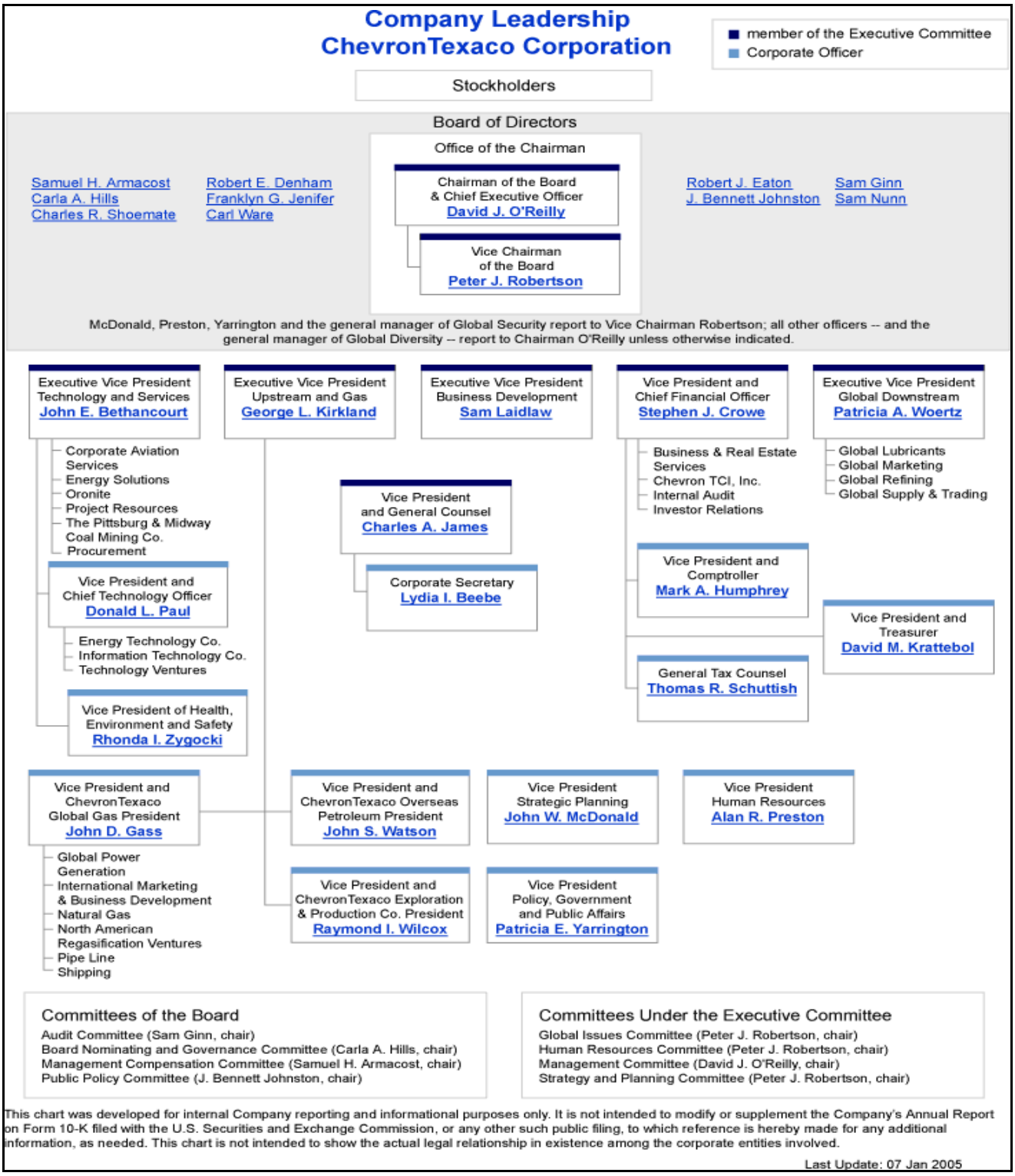


Exhibit 3: Business Unit and Enterprise IT Groups Responsible for Managing Technology and Delivering Business Value

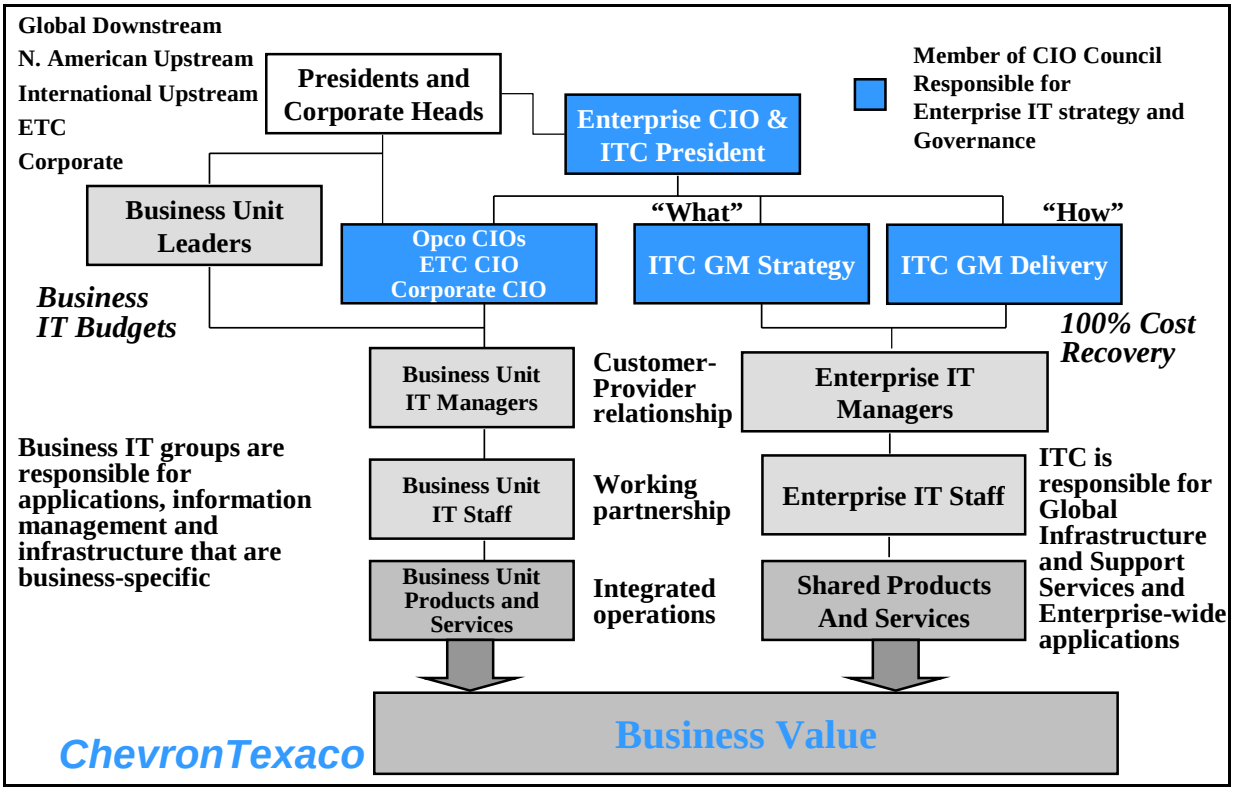


Exhibit 4: IT Product Brochures

ChevronTexaco

ITC Global Network Products

v4 2/04

Network Product Management is responsible for the business and planning aspects of the network environment. We develop products and services plans, including cost and pricing models to calculate rates, prepare budgets, track actual costs and revenue. We translate customer requirements into effective product and technology plans and offerings through partnerships with the delivery organizations and external suppliers. Additionally, Network Product Management articulates infrastructure requirements and funds projects to meet those requirements. This requires building the ongoing trust and relationships with our customers and ensuring that ITC carefully manages and recovers its annual costs.

ITC Network Products

Telephone Services – TW03C

- High-quality, reliable service at the lowest cost possible
- Includes the telephone instrument
- Local and long-distance calls
- Special service options such as Voice Mail, 800 numbers, additional lines, Calling Cards, ACD
- Most of these services are offered only to domestic customers
- International equipment is generally owned and maintained by the operating company's suppliers

Additional Lines

- Additional telephone lines are an option for customers who receive many calls or have a business requirement for a private line

Audio Conferencing

- Two Audio Conferencing options are available at most large domestic ChevronTexaco sites:
  1. Desktop office telephone conference calling feature
  2. Conference bridge service *(The conference system is available through the MeetingPlace Conference System Web page, or scheduling can be done over the phone)*

Automatic Call Distribution (ACD)

- For high volume of incoming calls. This service keeps incoming calls in queue and distributes them in the order received among the service representatives who are logged in, ensuring an even distribution of calls

Calling Cards

- Calling Cards are available to any authorized ChevronTexaco employee or contractor worldwide. Calling Cards allow charging the cost of external business calls to the office telephone number

Cellular and PCS Telephones (Wireless)

- Global Procurement maintains nationwide agreements with certain cellular suppliers to supply cellular phone airtime services and equipment. Customers should contact these companies directly for cellular rates, deliverables, support and expected service levels. For additional information, please see the Cellular and PCS Web site

Miscellaneous Telephone Services

- Services include a broad range of project-based voice and data services which are not a part of the telephone infrastructure and are billed directly to the customer

Wireless LAN (802.11b) – TW46C

- The Wireless LAN product provides secure, high-speed access to all network resources wirelessly (data access speeds up to 11 Mbps)
- Provides ability to move freely around a facility (conference rooms, training rooms and common areas) and have real-time access to all network data
- Help Desk and Design Support
- Standard Wireless configuration across the enterprise
- Available only by subscription
- For more info please visit: *http://nowires.chevrontexaco.com/*

Product Analyst: Ernie Ander/281-596-2199/anderew@chevrontexaco.com

Internet Access – TW05C

- ITC Internet Access service provides secure and fast (high capacity) connections to the public Internet (World Wide Web)
- Subscription is required to use the Internet Access Service
- Internet Access Homepage URL: *http://itc.chevrontexaco.com/Products/InternetAccess.htm*

Special Internet Access: Extranet Services

- Custom design and engineering of Internet firewalls and gateways for specialized needs and applications
- Network Security Team URL: *http://citc-nst.chevrontexaco.com/custools.htm*

Product Analyst: Victor Vuong/925-842-9129/vavu@chevrontexaco.com

Remote Access – TW06C

- Provides remote connectivity to ChevronTexaco network resources
- Approved by an appropriate authorization authority
- Available only by subscription
- All PC's that remotely connect to ChevronTexaco are required to have an anti-virus software
- Remote Access Homepage URL: *http://itc.chevrontexaco.com/resources/gentechinfo/rap/*

Enhanced Dialer

- The Enhanced Dialer provides a two-step process for remote access into ChevronTexaco
- The AT&T Business Internet Service (BIS) supports normal dial-up and ISDN dial connections
- The Enhanced Dialer and Cisco VPN Client are included in the GIL2 Build and also available for Non-GIL PCs
- VPN with the Enhanced Dialer does not require a subscription to the VPN Broadband Remote Access Service
- Enhanced Dialer URL: *https://dialer-access.chevrontexaco.com*

Virtual Private Network (VPN) Broadband

- Must have DSL (Digital Subscriber Link) or Cable broadband access to the Internet
- Provides an encrypted secure connection
- The current broadband Cisco VPN 3000 Client is also available for Non-GIL PCs
- VPN URL: *https://vpn-access.chevrontexaco.com*

SecurID Service

- A network authentication service that provides two-factor authentication
- REQUIRED for all remote access into ChevronTexaco
- SecurID URL: *http://itc.chevrontexaco.com/resources/gentechinfo/rap/rascit.htm#securid*

Spyrus Access Reader

- Device to read the SecurID/SmartBadge soft token
- Supports applications such as user authentication, challenge-response, e-cash, and loyalty points schemes
- Compact smart card reader that functions both stand-alone and connected to a PC
- Mainly for user that has a non-GIL PC

Product Analyst: Victor Vuong/925-842-9129/vavu@chevrontexaco.com

Emergency Response – TW11C

- Corporate-wide emergency response program
- Self contained Semi-Trailer Communications Center
- Capable of being airlifted anywhere in the world
- Available 7 days a week, 24 hours a day, 365 days a year
- Corporate funded

Product Analyst: Ernie Ander/281-596-2199/anderew@chevrontexaco.com

Telecom Time and Materials – TW12C

- Voice and Data Moves, Adds, Changes (MACS)
- LAN Support for Customer-Owned Equipment
- Wireless Consulting and Support for Customer Owned Equipment
- Service provided by EDS and Verizon
- Fixed Rate Billing
- Billed via Vantive Tickets

Product Analyst: Ernie Ander/281-596-2199/anderew@chevrontexaco.com

Wireless Radios and Satellite Services – TW18C

- FCC and FAA Licensing and permit activities
- Radio Maintenance Service Agreement
- Motorola Radio Volume Purchase Agreement
- API Telecommunications membership fees
- Fixed rate billing or SAP Sales Agreements

Product Analyst: Ernie Ander/281-596-2199/anderew@chevrontexaco.com

Cross Functional Help Desk – CS05C

- Central IT Service Center Help Desk (ITSC) is available 7 x 24
- Committed to answering most calls within 30 seconds
- Will attempt to resolve your problem on the initial call
- The ITSC is equipped with diagnostic tools, information, and expertise to aid in problem determination and resolution
- Support agents will track, manage and escalate your problem until resolved
- They will also send a desk-side technician to help you, if needed
- This single-point approach helps to resolve individual problems quickly, as well as to quickly discover and resolve larger problems
- Some regional support locations have retained locally-funded help desks, but coordinate their work with the same centralized Help Desk for tasks such as off-hours call support
- Other support services include:
  - Problem Management – handle problem or escalated calls, outage review, identify trends and chronic problems
  - Change Management – coordinates server changes and outages
  - Asset Management – tracks certain network hardware and software assets
  - Service Order Processing – handle Remote Access project work

Product Analyst: George Mon/925-842-0389/gcmo@chevrontexaco.com

MPI (WAN) – TW14C

- US WAN connectivity is delivered via ChevronTexaco's MPI (Multi-Protocol Internet)
- The MPI enables IP-secure universal inter-networking for all directly connected sites, as well as international e-hub connected sites
- The MPI enables access to ChevronTexaco's internal Web (also known as the ChevronTexaco Intranet)
- The MPI enables network access to:
  - Centralized Computing/Mainframe resources
  - Shared Server resources
  - Internet Access (to the public Internet and World Wide Web)

US Hub Sites

- Wide Area Network (WAN) connectivity for customers located at US Regional sites is provided via the MPI backbone (ChevronTexaco's fully-managed core WAN infrastructure)
- US Hub sites include Bakersfield, ChevronTexaco Park, Concord, Houston (Hayes Road, BOB, THP, Briar Park), Midland, New Orleans, Richmond, and Lafayette

US Non-Hub Sites (Remote MPI Sites)

- WAN connectivity for customers located at domestic non-hub sites (Remote MPI Sites) is provided via "end-to-end", fully-managed remote site connections into ChevronTexaco's core WAN infrastructure

Americas International (Canada and Latin America Remote Sites)

- WAN connectivity for Americas International sites is provide via connections into the Houston and San Ramon e-hubs. Central NetOps "Monitor-only" router/circuit support is available to Americas international remote sites.

For More Information please visit *http://itc.chevrontexaco.com/Products/Network.htm*

Product Analyst: Raul Sequeira/925-842-3557/rseq@chevrontexaco.com

Global Architecture Design & Security – TW41C

Manages the plan for ongoing enterprise wide security, architecture and design of CVX's global telecommunications network infrastructure that is not included in the product rates

- Maintain evergreen global strategic network plan, architecture, design, and standards
- Enable better business practices by focusing on strategies to enhance the network
- Identify business opportunities to further leverage the network infrastructure
- Emphasize the network as the technology enabler
- Ensure secure enterprise network environment

Product Analyst: George Mon/925-842-0389/gcmo@chevrontexaco.com

ITC Global Network Architecture Team (GNAT) – Services

Network Architecture and Design Consulting

- Application and Network Modeling
- Time and material consulting and design for telecom/network technologies and architectures
- Network pilot projects
- Infrastructure assessment

Manager: Will Blackbird/281-596-2267/blackwj@chevrontexaco.com

Exhibit 5: Strategic Staffing Model

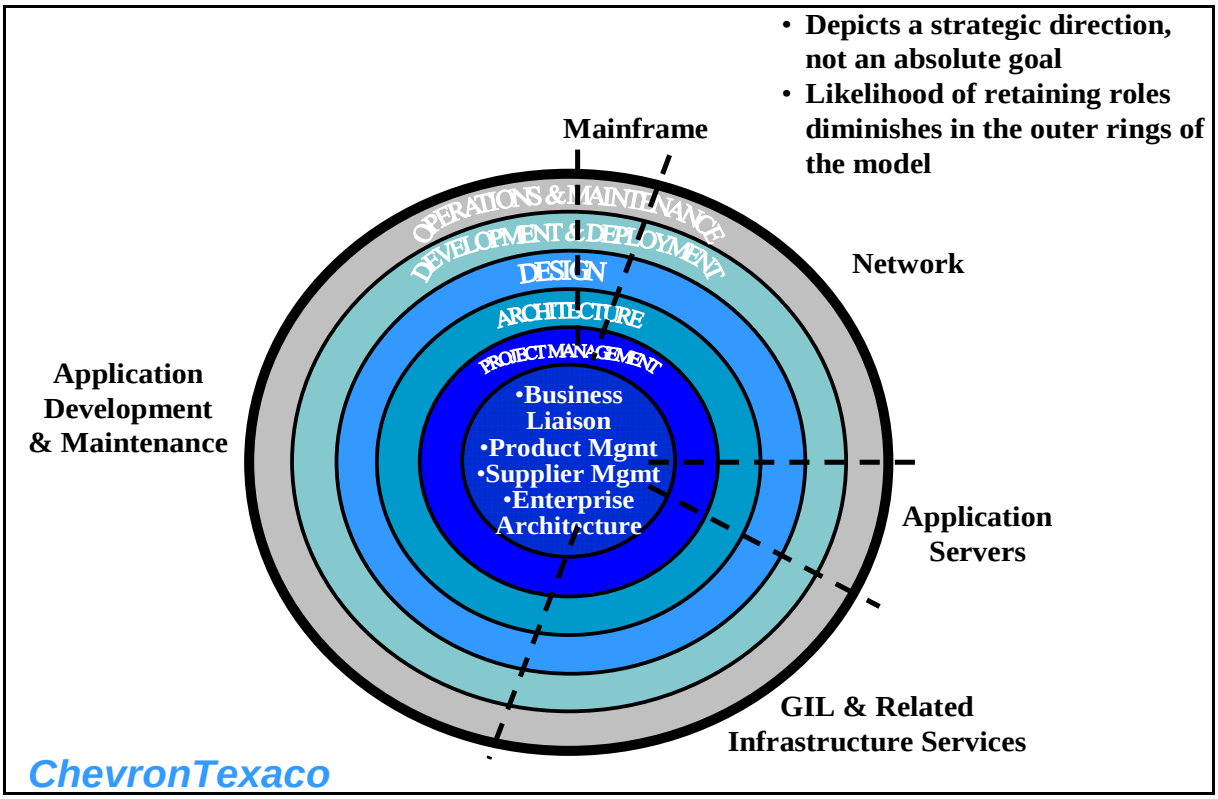
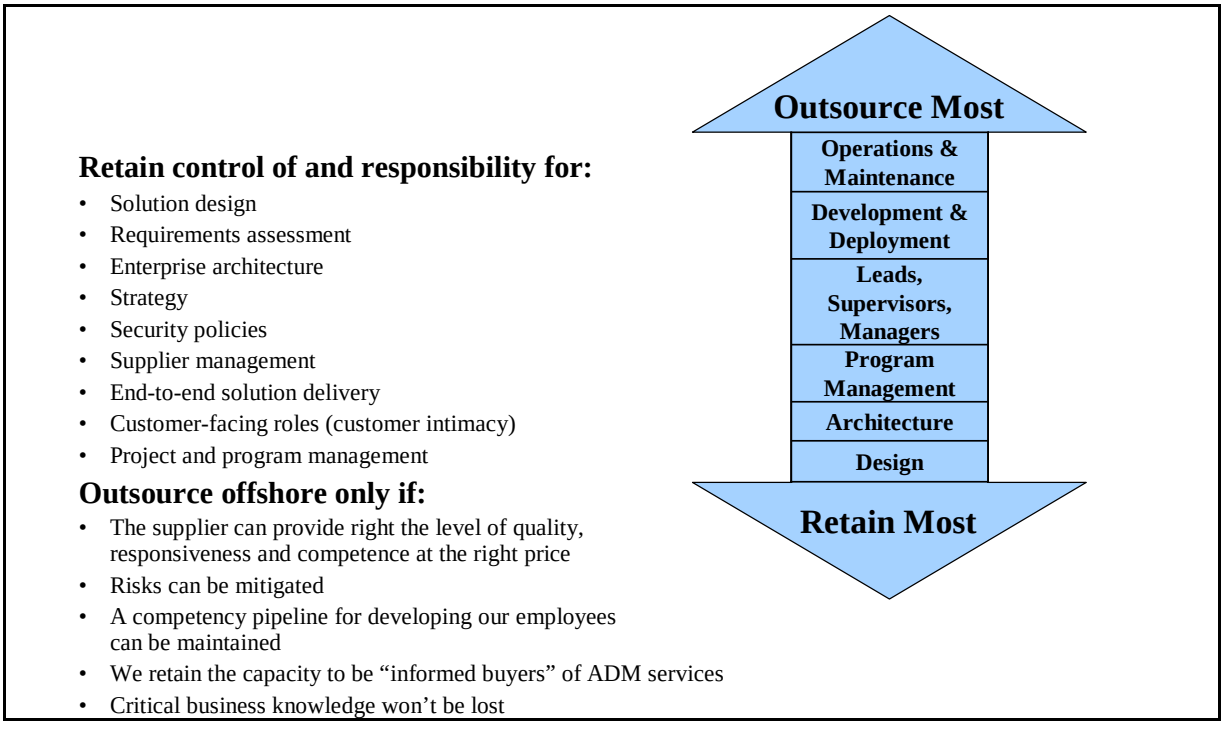


Exhibit 6: ADM Competency Retention Strategy



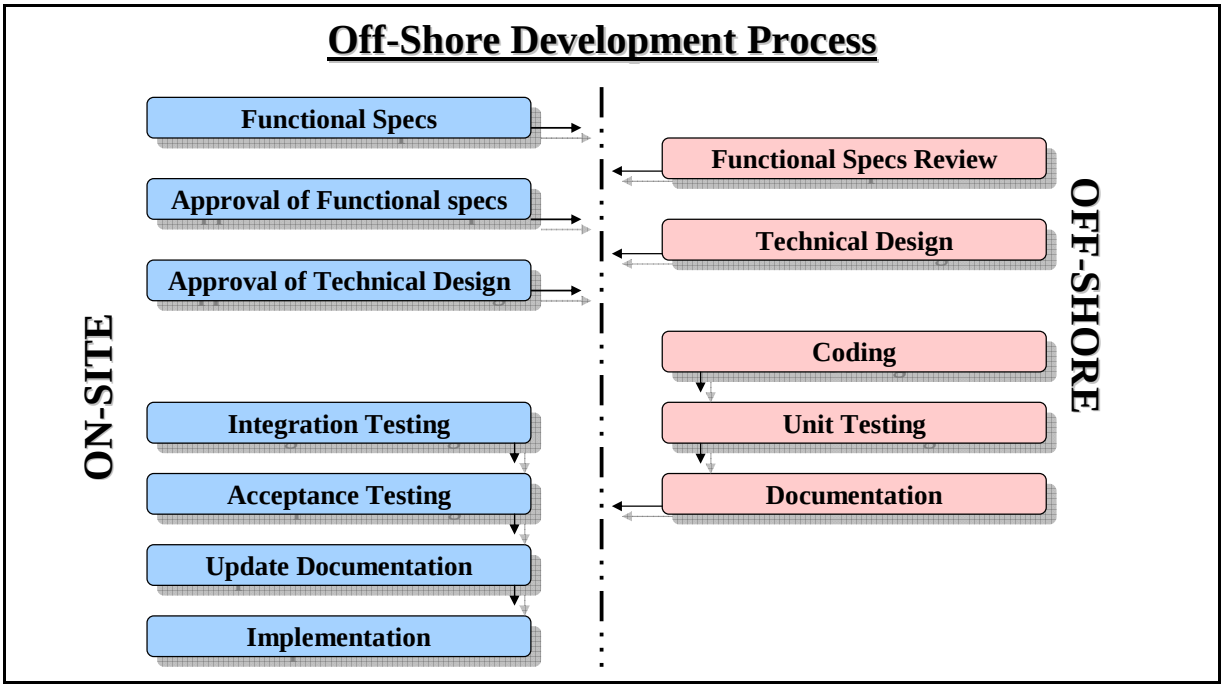
Retain control of and responsibility for:

- Solution design
- Requirements assessment
- Enterprise architecture
- Strategy
- Security policies
- Supplier management
- End-to-end solution delivery
- Customer-facing roles (customer intimacy)
- Project and program management

Outsource offshore only if:

- The supplier can provide right the level of quality, responsiveness and competence at the right price
- Risks can be mitigated
- A competency pipeline for developing our employees can be maintained
- We retain the capacity to be "informed buyers" of ADM services
- Critical business knowledge won't be lost

Exhibit 7: Development Solution: Project split between offshore and onsite with a mix of CVX and Supplier resources onsite



About the Center for Information Systems Research

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CISR was founded in 1974 and has a strong track record of practice based research on the management of information technology. As we enter the twenty-first century, CISR's mission is to perform practical empirical research on how firms generate business value from IT. CISR disseminates this research via electronic research briefings, working papers, research workshops and executive education. Our research portfolio includes:

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- What the CEO wants from IT
- The Future of the IT Organization
- IT Governance in Top Performing Firms
- Enterprise Architecture as Strategy
- IT Portfolio Investment Benchmarks & Links to Firm Performance
- Reducing IT-Related Risk

IT and Business Strategy

- Business Models and IT Investment and Capabilities
- IT-Enabling Business Innovation and Transformation
- How IT Can Enhance Business Agility

Managing Across Boundaries

- Effective Governance of Outsourcing
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- Effective Distributed Collaboration
- Effective IT Engagement Inside and Outside the Firm

Since July 2000, CISR has been directed by Peter Weill, formerly of the Melbourne Business School. Drs. Jeanne Ross, George Westerman and Nils Fonstad are full time CISR researchers. CISR is co-located with the MIT Center for Digital Business and Center for Collective Intelligence to facilitate collaboration between faculty and researchers.

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CONTACT INFORMATION

Center for Information Systems Research
MIT Sloan School of Management
3 Cambridge Center, NE20-336
Cambridge, MA 02142
Telephone: 617/253-2348
Facsimile: 617/253-4424
http://web.mit.edu/cisr/www

Peter Weill, Director	pweill@mit.edu
Christine Foglia, Center Manager	cfoglia@mit.edu
Jeanne Ross, Principal Res. Scientist	jross@mit.edu
George Westerman, Res. Scientist	georgew@mit.edu
Nils Fonstad, Research Scientist	nilsfonstad@mit.edu
Jack Rockart, Sr. Lecturer Emeritus	jrockart@mit.edu
Chuck Gibson, Sr. Lecturer	cgibson@mit.edu
David Fitzgerald, Asst. to the Director	dfitz@mit.edu
Tea Huot, Administrative Assistant	thuot@mit.edu

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