



A Report for
Sample Company

Business Impact Analysis (BIA)

16 December 2002
Engagement: XXXXXXXXXX

research consulting measurement community news

Gartner

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Introduction/Executive Overview

Objectives

The purpose of the business impact analysis (BIA) was to help Sample Systems (SAMPLE) identify which business units, operations and processes are essential to the survival of the business. The BIA will facilitate the identification of how quickly essential business units and/or processes have to return to full operation following a disaster situation. It will delineate the business impact of disaster impact scenarios on the ability to deliver product or to support mission-critical services. The BIA will also facilitate the identification of the resources required to resume business operations to a survival level.

Business impacts are identified based on a worst-case scenario that assumes that the physical infrastructure supporting each respective business unit has been destroyed and all records, equipment, etc. are not accessible within 30 days. Please note that this report does not address recovery assumptions, such as the availability of experienced personnel for recovery, because this type of assumption is typically included in a business continuity plan (BCP). Issues such as recovery concerns, new threats, or emerging trends in disaster recovery or business continuity, are outside the scope of the BIA, but are being provided in a separate Gartner “best practices” document.

The objectives of the business impact analysis (BIA) are as follows:

- Estimate the financial impacts for each major SAMPLE business unit, assuming a worst-case scenario
- Estimate the intangible (operational) impacts for each major business unit, assuming a worst-case scenario
- Define the estimated number of personnel required for recovery operations
- Identify the organization’s business unit processes and the estimated recovery time frame for each major business unit.

Scope

The scope for the SAMPLE BIA includes the following business units and shared services:

- Corporate Communications
- Engineering
- Facility Services
- Finance (Including AP and Payroll)

- Human Resources (Including Benefits, Employee Training, Safety/Risk Management)
- Marketing (Including Customer Care, Sales)
- Materials Management
- Network Operations Center (NOC)
- Operations (Including Pokipsie, Melvin, Tucson, and Phoenix)
- Plant Assignment and Dispatch
- Purchasing
- Regulatory Affairs

Approach

Gartner conducted interviews with more than 50 key SAMPLE business personnel during August 2002. In addition, 15 SAMPLE business unit representatives were surveyed using an electronic BIA tool. The objective of these interviews and surveys was to identify processes, along with associated estimated recovery time frames, estimated financial impacts, operational impacts and estimated personnel required for recovery operations. The interview process utilized a series of standard questions developed for SAMPLE (see Appendix A). All BIA interviews were conducted by Gary Drake and Jason Sausser.

Document Organization

Specific information provided by each of the business units in alphabetical order is documented in the following sections of this document.

The last section, Business Impact Analysis Summary, includes information that is most appropriately considered in the overall SAMPLE perspective to assist in the development of an appropriate recovery strategy, such as the recovery personnel requirements to help size an alternate recovery location.

Note: Many of the findings reported in this report are recorded exactly as they were captured from surveys and interviews. Some statements made by SAMPLE employees have been re-worded for clarity.

Corporate Communications

The following person was surveyed for Communications: Tom Johnson.

Business Processes

Table 1. Business Processes Identified by Communications

Business Process	Description
Communications	Provide effective communications to employees, customers, regulatory commissions and the State legislature about SAMPLE.
Projects and assignments come up on an as-needed basis and vary according to scope and requirements	Communications responds as required.

Table 2. Critical Business Records Identified by Communications

Business Unit	Record Name
Communications	None identified

Table 3. Regulatory Reporting Requirements for Communications

Business Unit	Report	Frequency	Recipients
Communications	None identified		

Table 4. Operational Impacts Identified by Communications

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	0
Competitive Advantage	2
Shareholder Confidence	4
Financial Reporting	0
Industry Image	4
Employee Morale	4
Customer Service	4
Employee Resignations	2
Vendor Relations	3
Regulatory	0
Increases in Liability	1
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 5. Number of Recovery Personnel by Day for Communications

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
2	2	2	2	4	4	4	7	7	7

Findings

- Communications stated that it would be less than a day before an outage had a significant impact on SAMPLE business units.
- Communications reported that they are extremely vulnerable to a prolonged outage or disruption.
- Communications reported that it would be extremely difficult to recover from a prolonged outage or disruption.

Engineering

The following people were either interviewed or surveyed for Engineering: Mickey Lolich, Denny McLain, Norm Cash, Jim Northrup, Mickey Stanley, Bill Freehan, and Al Kaline.

Business Processes

Table 6. Business Processes Identified by Engineering

Business Process	Description
New order processing	Service changes, disconnects, etc.
Design	Plans, layouts and specifications for new installs.
MARKS	Taking orders for service.
TFAX	Ordering services.
Jordash	Orders for operations.
Visio	Drawings.
AutoCAD	Plans, drawings.
TCS	Timekeeping.
Remedy	Trouble tickets.
ACMP	Maintain cable records for all companies (except Pokipsie).

Table 7. Critical Business Records Identified by Engineering

Record Name	Becomes Critical	Alternate Source	Media Type
ACMPs	< 1 Day	Paper	Other
Cut Sheets	< 1 Day	Paper	Other

Table 8. Regulatory Reporting Requirements for Engineering

Report	Frequency	Recipient	Type of Penalty
Number of calls blocked during period of time	On Demand	FCC	Unknown
Antenna Registrations	Other	FCC	Unknown
Quarterly Event Reports	On Demand	SAMPLE Management	Unknown

Table 9. Operational Impacts Identified by Engineering

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	0
Competitive Advantage	2
Shareholder Confidence	2
Financial Reporting	0
Industry Image	2
Employee Morale	3
Customer Service	4
Employee Resignations	0
Vendor Relations	3
Regulatory	1
Increases in Liability	0
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 10. Number of Recovery Personnel by Day for Engineering

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
120	120	120	120	120	120	120	120	120	120

Findings

- Engineering reported that it would be extremely difficult to recover from a significant disruption or outage if AutoCAD data were lost.
- Engineering reported that there is a significant amount of critical data stored on individual computer hard drives, because there is no available space on the common (shared server) drives.
- Engineering reported that they are only somewhat vulnerable to a prolonged disruption or outage. Engineering reported that they were instrumental in recovering the Central Data Center recently.
- Engineering reported that it would take at least one day to complete the backlog of work for each day of outage.
- Engineering reported that if the 31N6 system is down, there is no paper backup. Work could continue until the queue was empty.

- Engineering reported that if their services were unavailable, it would be less than one day before a significant impact on SAMPLE occurred.
- Engineering reported that SAMPLE experiences many cable cuts during the construction season and that it could take up to three days to restore a 400-pair cable.
- Engineering reported that it costs \$600 per hour for each voice channel out of service and that there are currently 2,600 channels throughout the Sample enterprise.
- Engineering reported that services revenues are \$78M annually.

Facility Services

The following person was surveyed for Facility Services: Dick McCauliff.

Business Processes

Table 11. Business Processes Identified by SAMPLE Facility Services

Business Process	Description
Facility maintenance	To maintain the structural, mechanical, electrical, and other related building components and finishes in a professional and workmanlike manner.
Contract administration	To develop and manage service and construction contracts.
Utility services and payments	To add/delete and process utility service payments Enterprise-wide.
Real property lease administration	To manage all real property acquisitions/sales and leases Enterprise-wide.
Space planning and management	To control and manage space utilization for office layouts.
Security (Central District Only)	To provide computerized card reader/proximity access system and evening manned security guard services.

Table 12. Critical Business Records Identified by Facility Services (Central District Only)

Business Unit	Record Name
Facility Services	PCSC Security System Software Database
Facility Services	Hard Copies of Security User Form Records
Facility Services	Facility Drawings—both Mylar and Bluelines
Facility Services	Facility Construction and Maintenance Project Records

Table 13. Regulatory Reporting Requirements for Facility Services

Business Unit	Report	Frequency	Recipients
Facility Services	None identified		

Table 14. Operational Impacts Identified by Facility Services

Operational impacts are rated on a scale of 0-4, where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	4
Competitive Advantage	3
Shareholder Confidence	1
Financial Reporting	3
Industry Image	2
Employee Morale	4
Customer Service	4
Employee Resignations	0
Vendor Relations	0
Regulatory	0
Increases in Liability	4
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 15. Number of Recovery Personnel by Day for Facility Services

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
7	7	8	10	10	11	12	12	12	12

Findings

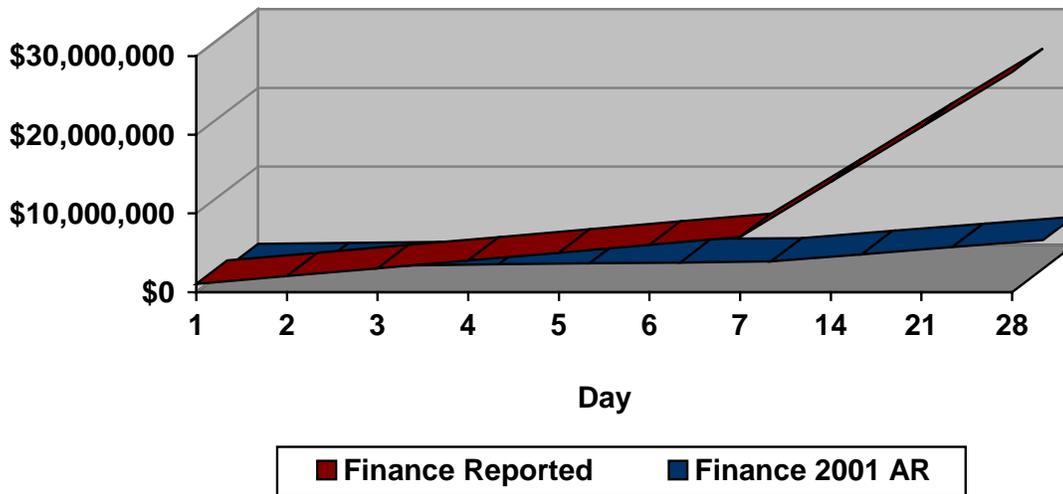
- Facility Services reported that ATU had an emergency plan that has been updated by Willie Horton of Safety and Risk Management.
- Facility Services performs periodic fire alarm detection and suppression system testing.
- Facility Services reported that while SAMPLE does not really have a Disaster Recovery plan, all emergency related issues are routed through the Pokipsie NOC, which maintains a callout list of all facilities team members.
- Facility Services reported it will take from 12 to more than 16 hours to process backlog for each day of downtime.
- Facility Services reported that they are vulnerable to a prolonged disruption or outage.
- Facility Services reported that it is somewhat easy to recover.

- Facility Services stated that four days is the maximum outage before a significant impact on SAMPLE as a whole occurred.
- Facility Services reported that severe impact would occur during the months of December, January, and February, because colder months affect facility operations during power or utility outages. Impacts would be least severe during the months of June through October.
- Facility Services reported that it has extreme reliance on a standalone workstation.
- A seismic survey conducted in July of 2001 cited several items of concern regarding the Data Center located near the corner of 17th and G Streets in Pokipsie. A key item cited was the lack of structural bracing that would allow the building to withstand earthquake loads. The report also stated that many cable trays and hung equipment did not have diagonal braces. The Central Data Center was originally constructed in the 1940s and had additions constructed in 1963 and 1969. “Major cracking” in the 1969 addition was mentioned in the report. The conclusion of the seismic report was that the Central Data Center is probably well below current earthquake standards. The loss of the Central Data Center would be catastrophic to SAMPLE and its customers.

Finance

For the purpose of this report, Billing and Collections, the Controller's Office, Financial Planning, Disbursements, Cash Management, Accounts Payable and Payroll were all considered part of the Finance function. The following people were either interviewed or surveyed for Finance: Kevin A, Deborah C, Michael D, Nancy V, Laurie B, Jenny S and Joe T.

Figure 1. Financial Impact for Finance



Source: Gartner, 2002

Findings

- Finance reported estimated total SAMPLE losses of \$1M per day if all services were lost.
- Total SAMPLE receivable days were estimated at \$128,526 per day, based on 2001 Financials.

Business Processes

Table 16. Business Processes Identified by Finance

Business Process	Description
Corporate budget	Management of process; analysis of variances between planned and actual results.
Financial analysis	Assist managers with financial analysis of business cases.
Support business development process	Assist Managing Director, Business Development as required
Support SAMPLE information system (business analysis software application)	Provide support/assistance to the organization (training, maintenance, etc.).
IRS reporting	IRS year-end reports—1099s, etc.
Finance/accounting	Provide financial / accounting services.
Load Deville/CBP files to SAP	Load files are received from IT, cleaned and uploaded into the SAP system.
Load Payroll files to SAP	Load files are received from ADP, cleaned and uploaded into the SAP system.
Record month-end journal entries in SAP	Account analysis and verifications are performed on SAP data as the basis of information for monthly journal entries.
Load Intranet revenue	Load files are received from IT, cleaned and uploaded into the SAP system.
Load Apprise sales data	Load files are received from IT, cleaned and uploaded into the SAP system.
Enter PSA data to SAP	Reports are provided from the PSA system and manual journal entries are prepared to record revenue.
Enter NIBS data to SAP	Reports are provided from the NIBS system and manual journal entries are prepared to record revenue.
Enter R data to SAP	Reports are provided from the R system and manual journal entries are prepared to record revenue.
Enter Erie data to SAP	Reports are provided from the Erie system and manual journal entries are prepared to record revenue.
Load project information in PRS	Information from SAP is downloaded into PRS for project reporting purposes.
Enter STS data to SAP	Reports are provided from the STS system and manual journal entries are prepared to record revenue.
Load and reconcile PCC data in SAP	Download and reconciliation of bank data from the Internet Poindexter system.
TCS (time entry system)	Jane Doe—Supervisor; Minnie C—Processing pay records; June A—Processing pay records and distributing earnings statements; ADP—third-party payroll processor—calculates and prints paychecks and processes all direct deposits.

Business Process	Description
Pay vendors	Bob T—Supervisor, Prints checks, quality control; Frank M—AP clerk; Susan S—AP clerk; Paula P—AP clerk; Tim AAP clerk and acting supervisor in Bob's absence.
Report federal excise tax	Collect general ledger and CBP data and report to the IRS.
Report sales tax	Collect data from CBP and report to various cities and boroughs.
Report E911	Collect data from CBP and report to various cities and boroughs.
Report property tax	Collect data from SAP asset files and report to various cities and boroughs.
Income tax returns	Download trial balance from SAP, prepare depreciation and other analysis to prepare returns.

Table 17. Critical Business Records Identified by Finance

Business Unit	Record Name	Becomes Critical	Alternate Source
Finance	SAP data (F/S, CPR)	< Day 1	Other Excel
Finance	Deville/ CBP	Day 7	Paper Accrued estimate
Finance	Payroll files	Day 14	Paper Accrued estimate
Finance	Month-end JEs	Day 7	Paper Accrued estimate
Finance	PSA	Over Day 28	Paper Accrued estimate
Finance	NIBS	Over Day 28	Paper Accrued estimate
Finance	STS	Over Day 28	Paper Accrued estimate
Finance	Historical financial information	Day 14	Excel/paper reports
Finance/AP & Payroll	Time records (TMS)	Day 6	Paper None
Finance AIS	System information	Day 14	Paper Excel
Finance	Intranet	Over Day 28	Paper Accrued estimate
Finance	Apprise sales	Over Day 28	Paper Accrued estimate
Finance/AP & Payroll	Employee records	Day 6	Other ADP—third-party processor
Finance	Rodolphi	Over Day 28	Paper Accrued estimate
Finance	PRS	Over Day 28	Paper Accrued estimate
Finance	PCC	Over Day 28	Paper Accrued estimate
Finance/AP & Payroll	Vendor Invoices	Day 14	Paper vendor reprint
Finance	Great Lakes	Over Day 28	Paper Accrued estimate
Report federal excise tax	Excise Tax	Day 10	Paper Accrued estimate
Report sales tax	Sales Tax	Day 30	Paper Accrued estimate
Report E911	E911	Day 60	Paper Accrued estimate
Report property tax	Property Tax	Over day 28	Paper Accrued estimate
Income tax returns	Income Tax	Over day 28	Paper Accrued estimate
Finance	Project Records	Day 14	Paper Excel

Table 18. Regulatory Reporting Requirements for Finance

Report	Frequency	Recipient	Type of Penalty
SEC quarterly and annual reporting	Quarter end	SEC	Financial
Form M annual reports	Year end	RCA	Financial
USF/ RCC reports	Month end	FCC/ AK Dept Rev.	Financial
Cost Allocation Manual	Year end	FCC—RCA	Financial
Bank Debt Compliance	Month end	Financial Institutions	Financial

Table 19. Operational Impacts Identified by Finance

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	4
Competitive Advantage	2
Shareholder Confidence	2
Financial Reporting	4
Industry Image	2
Employee Morale	4
Customer Service	2
Employee Resignations	4
Vendor Relations	4
Regulatory	3
Increases in Liability	4
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 20. Number of Recovery Personnel by Day for Finance

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
13	13	18	18	22	22	22	22	28	28

Findings

- Finance reported that it is difficult to recover.
- Finance reported that they are somewhat vulnerable to an outage.
- Finance reported that it would take six to 12 hours to complete the backlog of work for each day of outage.
- Finance reported that one week is the maximum length of outage before a significant impact SAMPLE as a whole occurred.
- Finance reported that severe operational impacts would occur during the month of December because of year-end payroll processing. Impacts are also significant during April, July and October due to quarter-end and January and February for year-end.
- Finance stated that SAMPLE must transmit payroll information to ADP (third-party processor) by Tuesday to avoid penalties that would be paid to a small

group of temporary employees falling under a NAFTA Agreement. The financial impact of these penalties was reported to be negligible.

- Finance stated that while some payments (such as from some federal agencies) are made electronically and via credit card, most payments are received in the form of checks.
- Finance stated that a loss of communications would have a significant impact on business operations.
- Retention policies are followed and records are stored both on- and off-site.

Human Resources

The following people were either surveyed or interviewed for Human Resources: Pierce Brosnan, Sean Connery, Roger Moore, Timothy Dalton and James Coburn.

Business Processes

Table 21. Business Processes Identified by SAMPLE Human Resources

Business Process	Description
Hiring new employees	Advertise open positions, provided candidates to managers, ensure qualified candidates are hired and entered into payroll.
Separating employees	Ensure that employees are properly removed from our active employment files when employees terminate.
Training employees	Plan training regimens, contract with vendors or develop and deliver training, record training completion.
Benefits administration	Design benefits; Select and manage vendors; Deliver benefits directly or through vendors; Develop and deploy benefits-related communications; Manage quality control directly or through vendors; Manage FMLA, and other leaves.
Compensating employees	Design compensation plans; Select and manage vendors; Coordinate compensation delivery through Payroll or vendors; Develop and deploy compensation-related communications; Manage quality control
HR system administration	Select, install, and maintain manual and automated human resources information systems.
Personnel records maintenance	Maintain electronic and hardcopy of personnel files.
Benefit data preparation for payroll transmission	Before each payroll data can be transmitted, two processes must be executed by HR to ensure all benefits are correct.
Internal and external reporting	Various internal reports and external reports (state and federal regulatory) are required on a daily, weekly, bi-weekly, monthly, quarterly, and annual basis.
Labor relations	Negotiate/maintain/administer Collective Bargaining Agreement (CBA) (Master Agreement/LOAs/MOAs); Process grievances and arbitration.
Employee relations	Conduct EEO investigations and represent company position in external Agency complaints; Advise in interpretation and administration of corporate compliance program and company policies and procedures; advise on the liability to the company in the HR arena; advise on performance management, discipline and discharge.

Table 22. Critical Business Records Identified by SAMPLE Human Resources

Business Unit	Record Name	When Required	Media Type	Alternate Source
Comp, Ben	HRIS Data	Day 5	Fixed disk	Personnel files
Comp, Ben	HRIS Personnel Files	Day 7	Paper	HRIS data
Comp, Ben	Plan Documentation	Day 7	Fixed disk and paper	Vendors, consultants, brokers
Comp, Ben	Vendor Service Agreements	Day 7	Fixed disk and paper	Vendors, consultants, brokers
Comp, Ben	Historical Records	After Day 28	Fixed disk and paper	None
Comp, Ben, HRIS	Vendor Contacts	Day 2	Fixed disk	Online directory
Comp, Ben, HRIS	Compensation Surveys	Over Day 28	Fixed disk	Repurchase
Comp, Ben, HRIS	Analysis Tools	Over Day 28	Fixed disk	Recreate
Employee Relations	Employee Relations Files	Day 3	Fixed disk and paper	None
Employee Relations	ER Vendor Contracts	After Day 28	Fixed disk and paper	Vendors
Employee Relations	Historical Records	Day 14	Fixed disk and paper	IBEW
Employment Services	Job/Recruitment File	Day 1	Paper	None
Employment Services	Requisition Log	Day 1	Fixed disk	None
Employment Services	Relocation Log	Day 5	Fixed disk	Paper files
Employment Services	Class Specifications	Day 14	Fixed disk and paper	None
Human Resources	Job Description	Day 1	Fixed disk	N/ A
Human Resources	Requisition	Day 1	Paper	N/ A
Human Resources	Desktop Procedures	Day 2	Fixed disk and Paper	None
Human Resources	Policies and Procedures	Day 5	Fixed disk and Paper	None
Human Resources	Training Vendor Contacts	Day 14	Fixed Disk	Online Directory
HRIS	Personnel Records	Day 1	Fixed Disk and Paper	None

Business Unit	Record Name	When Required	Media Type	Alternate Source
HRIS and Employee Relations	Collective Bargaining Agreement, All Sub-Agreements and Letters of Understanding	Day 1	Fixed disk and paper	IBEW
HRIS	Salary Step/Job Code listing	Day 5	Paper	Recreate
HRIS	Pension/Job Code listing	Day 5	Paper	Recreate
HRIS	Listing of what reports are due when	Day 5	Fixed disk	Paper

Table 23. Regulatory Reporting Requirements for SAMPLE Human Resources

Report	Frequency	Recipient	Type of Penalty
EEO1	Year end	US DOL	Product/ Service Disruption
Affirmative Actions Report	Year end	US DOL	Product/ Service Disruption
5500 Filing	Year end	IRS	Financial
EEO reporting	On demand	DOL	Financial
Plan and amendment filing	On demand	DOL	Financial
IRS Data Confirmation Surveys	On demand	IRS	Financial
Summary Annual Reports	September	Employees	Financial
Relocation Expense Report	Year end	IRS	Financial
FCC-395 Report	Annual	FCC	Financial
VETS-100	Annual	DOL	Financial
PBGC filing	Year end	PBGC	Financial
Agency Complaint Response	On demand	NABSCO, EEOC, NOAA, US DOL, SOA DOL	Financial

Table 24. Operational Impacts Identified by SAMPLE Human Resources

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	2
Competitive Advantage	2
Shareholder Confidence	2
Financial Reporting	4
Industry Image	3
Employee Morale	4
Customer Service	4
Employee Resignations	3
Vendor Relations	2
Regulatory	3
Increases in Liability	4
Other (Technical Training)	3

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 25. Number of Recovery Personnel by Day for SAMPLE Human Resources

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
15	15	15	15	15	15	15	15	15	15

Findings

- Human Resources reported it will take four to eight hours to process backlog for each day of downtime.
- Human Resources reported it is somewhat vulnerable to a prolonged disruption or outage.
- HR reported it is difficult to recover from a significant disruption or outage.
- Human Resources stated that one week would be the maximum outage before a significant impact on SAMPLE as a whole occurred.
- Human Resources has no special standalone workstation requirement.
- Human Resources stated that a loss of communications would have a significant impact on business operations.

- Human Resources reported that a total disruption in services would have a significant impact on ability to provide necessary staffing and training to the remainder of the organization.

Safety and Risk

The following person was surveyed for Safety and Risk: Ed Brinkman.

Business Processes

Table 26. Business Processes Identified by SAMPLE Safety and Risk

Business Process	Description
Insurance Requirements	Identify insurance needs, alternative risk financing, place coverage.
Safety Standards	Establish and monitor safety performance at the department level.
Safety Practices	Evaluate need for changing safety practices, update as necessary.
Safety Training	Establish safety training standards and frequency, set safety training objectives for insurance carrier and monitor results.
Administer Worker's Compensation Program	Manage Workers' Compensation claims
Accident Investigation	Establish investigation process, collect results distribute as required and necessary.
Environmental Compliance	Maintain inventory data on fuel tank location/capacities, chemical inventory and compliance procedures.
Damage Claim Administration	Report property, auto and general liability damage claims, resolve and approve claim settlements.

Table 27. Critical Business Records Identified by Safety and Risk

Business Unit	Record Name	When Required	Media Type	Alternate Source
Safety and Risk	Damage Report Claims	Day 7	Paper	Field Departments

Table 28. Regulatory Reporting Requirements for Safety and Risk

Report	Frequency	Recipients	Type of Penalty
OSHA 300	Year End	OSHA	Financial
SARA Title III	Annual	State/Local Environmental	Financial

Table 29. Operational Impacts Identified by Safety and Risk

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	1
Competitive Advantage	0
Shareholder Confidence	2
Financial Reporting	0
Industry Image	3
Employee Morale	3
Customer Service	2
Employee Resignations	2
Vendor Relations	0
Regulatory	3
Increases in Liability	4
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 30. Number of Recovery Personnel by Day for Safety and Risk

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
1	1	1	1	1	1	1	1	1	1

Findings

- Safety and Risk reported that it would take one to two hours to complete the backlog of insurance-related activity for each day of downtime.
- Safety and Risk reported that it would take from two to four hours to complete the backlog of Safety-related activity for each day of downtime.
- Safety and Risk reported that it would take more than two hours to complete the backlog of Claim Administration-related activity for each day of downtime.
- Safety and Risk reported that it is somewhat vulnerable to a prolonged disruption or outage.
- Safety and Risk reported that it is somewhat difficult to recover following a significant disruption or outage.
- Safety and Risk stated that the maximum outage before a significant impact on SAMPLE business units occurred is three days.

- Safety and Risk reported that there are minimal monthly operational impacts.
- Safety and Risk noted that there are special requirements to include communications with departments, insurance carriers and outside reporting agencies.
- Safety and Risk stated that it has no special standalone workstation requirement.
- Safety and Risk stated they have back up insurance records in Finance, the broker and carriers.
- Safety and Risk stated that SAMPLE maintains basic business interruption insurance coverage, including earthquake and flood, up to \$25 million. \$25 million excess is available but excludes earthquake and flood.

Marketing

The following people were either surveyed or interviewed for Marketing: Brenda, and Barbara.

Business Processes

Table 31. Business Processes Identified by SAMPLE Marketing

Business Process	Description
Product development	Identify customers and develop products to meet customers' needs. Ability to generate reports comparing data from several customer databases.
Product deployment	Support direct mail advertising and telemarketing with customer lists targeted at specific segments. Analyze data and track sales campaigns.
Publish SAMPLE directories and maintain 411 database	Maintain database of customer directory listing to facilitate publication of eight Enterprise-wide white- and yellow-page directories and source data for Directory Assistance 411 database.
Sales compensation reporting	Administer database, develop processes and generate reports used for compensation of internal sales organization.
Financial reporting	Perform analysis of financial results for marketing division, both expense and revenue.
Market research	Coordinate market research needs and maintain repository of information.
Manage product development process	Define process and forms.
Coordinate development of marketing plan	Define process and structure, coordinate input and maintain on current basis.
Customer and product analysis	Support product managers as needed with data, analysis and research needed to roll out product and customer plans.

Table 32. Critical Business Records Identified by Marketing

Business Unit	Record Name
Product Development, Market Research and Infosource	Historical customer billing records from all billing systems. Record of current billed services by customer.
Infosource	Directory Listings, Directory Subsystem and link to CBP (Deville)
Product Development	Sales Collateral (work with Deutchland Agency)
Marketing	All service order and billing systems
Marketing	Directory subsystem and linkage to CBP (Deville)
Marketing	AIS
Marketing	Sales Compensation Datamart

Table 33. Regulatory Reporting Requirements for Marketing

Business Unit	Report	Frequency	Recipients
Marketing	None		

Table 34. Operational Impacts Identified by Marketing

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	4
Competitive Advantage	4
Shareholder Confidence	3
Financial Reporting	2
Industry Image	2
Employee Morale	3
Customer Service	4
Employee Resignations	1
Vendor Relations	3
Regulatory	1
Increases in Liability	1
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 35. Number of Recovery Personnel by Day for Marketing

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
4	4	4	22	22	22	22	22	22	22

Findings

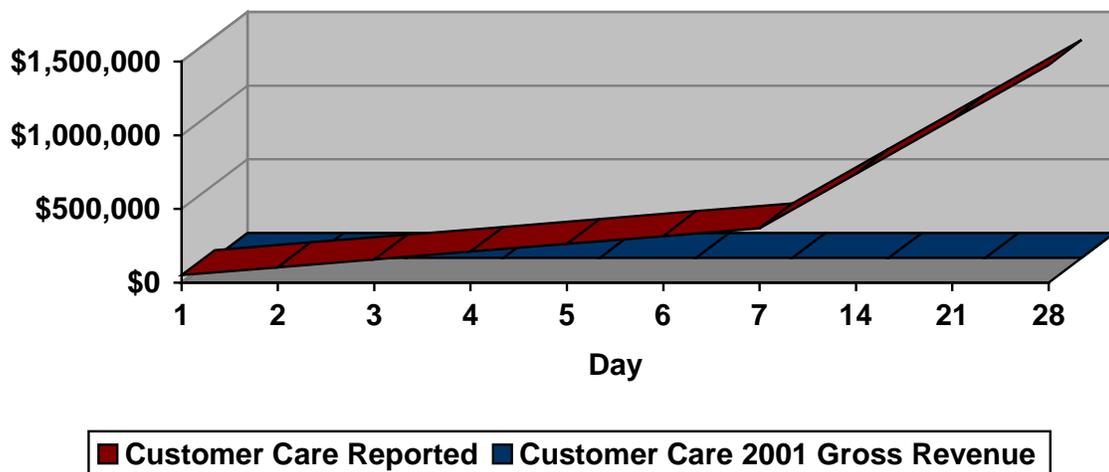
- Marketing reported that there would be significant impact to the company as a whole, if it were idled. The development of customer retention and win-back plans significantly impacts cash flow and customer retention. Although the initial role of marketing would be to identify key customers to ensure priority service restoration, they would need to quickly return to product development functions.
- Marketing is highly reliant on all billing systems, AIS, Sales Compensation Datamart and the Directory Subsystem.
- Marketing assumes that the billing systems are backed up nightly and the storage of these records is other than at 937 Quadrangle Ave. This is reported to be the only record of SAMPLE customers and their services.
- Marketing requires a list of customers, addresses and services in the first 24 hours. These are needed so that resources can support critical customer needs.
- Marketing reported that it suffered power loss, lost/corrupted data, loss of centralized computers, and the loss of local LAN servers during 2001. The workplace is significantly impacted during power outages and network failures. During the infrequent times that marketing has experienced power outages or network failures, employees have been unable to work. The work that marketing does is almost totally reliant on computer systems and applications.
- Marketing reported that it is very vulnerable to a prolonged disruption or outage. Marketing is highly reliant on all billing systems, AIS, Sales Compensation Datamart and the Directory Sub-system.
- Marketing reported that it is somewhat difficult to recover from a prolonged disruption or outage for information that is not backed up for individual PC's and mainframe applications.
- Marketing reported that there would be monthly operational impacts for sales compensation reporting, which requires billing system records along with manual reports provided by sales personnel. Once records are obtained, it would take a week to recreate a monthly report.
- Monthly performance reporting would be impacted without billing records; this includes customer, products, revenue and sales compensation reports.
- All marketing processes (marketing plan, product development, and research) are highly reliant on e-mail and the company intranet for communication.
- Market research is highly dependent on customer billing information along with access to the Internet for research sites.

- Customer and product analysis are highly reliant upon company proprietary data networks.
- Marketing estimated that once they have access to computers and the network applications, they should be functional within two weeks.
- Marketing estimated that once they have access to computers and the network applications, they should be functional within a couple weeks.
- Marketing reported that keeping phone lines working in SampleTown and maintaining customer service have to be the highest priorities.
- Marketing suggested that if a disaster should occur, the company should consider a plan to utilize use non-customer facing employees to assist operational areas.

Customer Care

The following people were either interviewed or surveyed for Customer Care: Bob J, Randy J and Rico Pi.

Figure 2. Financial Impact for Customer Care



Source: Gartner, 2002

Findings

Customer Care reported estimated financial losses of \$52,800 per day, based on 300 customer service representatives earning \$22 per hour; average daily gross revenue for 2001 was \$0.

Business Processes

Table 36. Business Processes identified by Customer Care

Business Process	Description
SAMPLE customer call center operations	Provide ACD agents to respond to customer calls/requests for local, long distance and/or Internet service, account inquiries and Directory Assistance listings.

Table 37. Critical Business Records Identified by Customer Care

Record Name	Alternate Source	When Required	Relative Importance
Cornbell Service order system, CBP billing system, JORDASH system, DA listings/records system.	Paper Printouts	Day 1	Extreme

Table 38. Regulatory Reporting Requirements for Customer Care

Business Unit	Report	Frequency	Recipients
Customer Care	None reported.		

Table 39. Operational Impacts Identified by Customer Care

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	0
Competitive Advantage	0
Shareholder Confidence	0
Financial Reporting	0
Industry Image	0
Employee Morale	0
Customer Service	4
Employee Resignations	0
Vendor Relations	0
Regulatory	0
Increases in Liability	0
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 40. Number of Recovery Personnel by Day for Customer Care

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
0	0	0	0	0	0	0	0	0	0

Findings

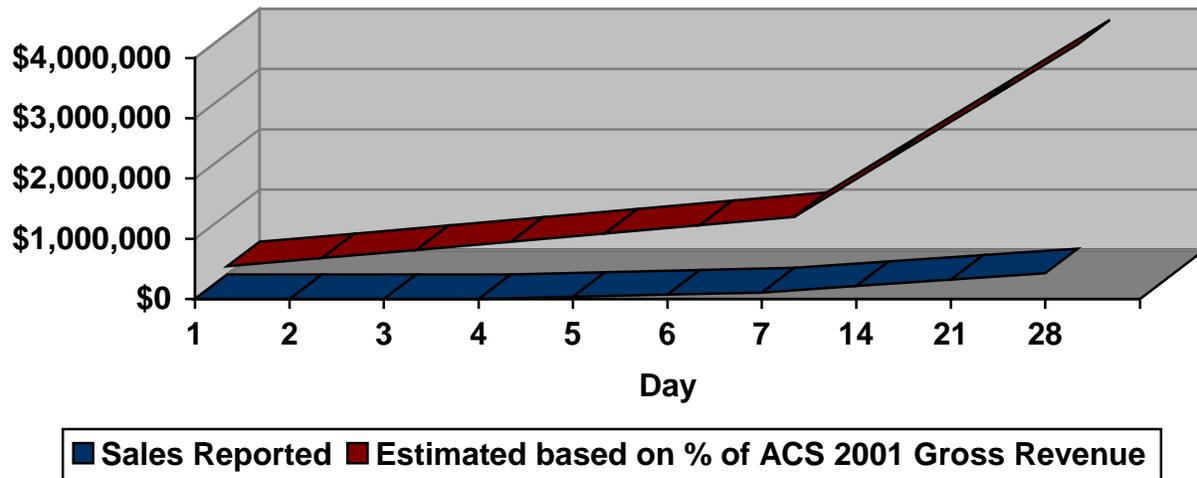
- Customer Care estimated financial losses of \$52,800 per day; average gross revenue for 2001 was \$0.
- Customer Care reported it would take eight to 12 hours to process backlog for each day of downtime.
- Customer Care reported current records management activity as follows: duplicate records are maintained, records are stored off site (at a facility in Pokipsie), and retention periods for records have been formally defined.
- Customer Care reported that it is not vulnerable to a prolonged disruption or outage.
- Customer Care reported that it is somewhat difficult to recover after a significant disruption or outage.
- Customer Care reported that they currently have 200,000 customers and that 50,000 of these would seek an alternate source after day five of a prolonged disruption or outage. Customer Care estimated that only 10,000 of the 50,000 customers who sought an alternate source of service would return after service was restored to normal.
- Customer Care stated that four days is the maximum outage before a significant impact on SAMPLE occurred.
- Customer Care reported that severe operational impacts would occur during the months of June and September, because these represent the busiest/peak service months.

Customer Care stated that it is extremely reliant upon communications services for business operations.

Sales

The following people were interviewed for Sales: Bobby Kennedy, John Hoover and Gordon Liddy.

Figure 3. Financial Impact for Corporate Sales



Source: Gartner, 2002

Findings

- Sales averaged estimated financial losses of \$35,616 per day; estimated daily loss as a percentage of gross revenue for 2001 was \$136,315.

Business Processes

Table 41. Business Processes Identified by Sales

Business Process	Description
Billing	Issue invoices to customers.
Order tracking	Log orders for new service.
Customer service	Support sales agents and existing customers.
911 Database	Sales maintains 911 Database.

Table 42. Critical Business Records Identified by Sales

Business Unit	Record Name	When Required	Media Type	Alternate Source
Sales	Customer Database	Over Day 28	Fixed Disk	Sales personal PCs

Table 43. Regulatory Reporting Requirements for Sales

Business Unit	Report	Frequency	Recipients
Sales	None required.		

Table 44. Operational Impacts Identified by Sales

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	2
Competitive Advantage	4
Shareholder Confidence	2
Financial Reporting	2
Industry Image	2
Employee Morale	4
Customer Service	3
Employee Resignations	1
Vendor Relations	1
Regulatory	0
Increases in Liability	0
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 45. Number of Recovery Personnel by Day for Sales

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
5	9	11	15	20	20	20	30	45	50

Findings

- Sales estimated financial losses of \$35,616 per day, beginning on day five following a severe disruption; average daily loss estimated as a percentage of gross revenue for 2001 was \$136,315 per day (15 percent of gross daily revenue).
- Sales reported that data loss or corruption occurred during 2001, but that it had little impact on operations.
- Sales reported it will take eight to 12 hours to process backlog for each day of downtime.
- Sales reported that it is somewhat vulnerable to a prolonged disruption or outage.
- Sales reported that it is easy to recover.

- Sales stated that four weeks is the maximum outage before a significant impact on SAMPLE as a whole occurred.
- Sales reported that there are no months where operational impacts would be more severe than for other months, but if an outage occurred at or near month end, it could have a severe impact.
- Sales personnel can work from home, if necessary.

Materials Management

The following person was surveyed for Materials Management: Sophia Loren.

Business Processes

Table 46. Business Processes Identified by Materials Management

Business Process	Description
Distribution—Distributing mail	The Distribution Lead oversees the daily operation; assignments are rotated weekly.
Distribution—Large copy jobs such as training manuals	The Distribution Lead oversees the daily operation; assignments are rotated weekly.
Distribution—Insertion operation to process billing	The Distribution Lead oversees the daily operation; assignments are rotated weekly.
Warehouse—Receiving stock and non-stock material	Warehouse Foreman oversees daily operations.
Warehouse—Issuing stock warehouse	Foreman oversees daily operations.
Warehouse—Restocking shelves warehouse	Foreman oversees daily operations.
Warehouse—Shipping to field locations warehouse	Foreman oversees daily operations.
Warehouse Office—Stock ordering	Warehouse Lead clerk oversees daily operations.
Warehouse Office—Cost coding freight invoices	Warehouse Lead clerk oversees daily operations.
Warehouse Office—Processing repairs and returns	Warehouse Lead clerk oversees daily operations.
Warehouse Office—Expediting orders	Warehouse Lead clerk oversees daily operations.
Warehouse Office—SAP computer system maintenance	Warehouse Lead clerk oversees daily operations.

Table 47. Critical Business Records Identified by Materials Management

Record Name	Becomes Critical	Alternate Source	Media Type
Warehouse Transactions	Day 4	Would keep paper records in interim	Other

Table 48. Regulatory Reporting Requirements for Materials Management

Report	Frequency	Recipient	Type of Penalty
None Reported			

Table 49. Operational Impacts Identified by Materials Management

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	4
Competitive Advantage	0
Shareholder Confidence	0
Financial Reporting	0
Industry Image	4
Employee Morale	0
Customer Service	4
Employee Resignations	0
Vendor Relations	0
Regulatory	0
Increases in Liability	0
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 50. Number of Recovery Personnel by Day for Materials Management

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
0	0	0	0	0	0	0	0	0	0

Findings

- Materials Management reported that they are vulnerable to a prolonged disruption or outage.
- Materials Management reported that it would be somewhat difficult to recover from a significant disruption or outage.
- Materials Management did not report how long it would take to complete the backlog of work for each day of outage.
- Materials Management reported that if they were unable to access SAP, there would be a significant impact after three days; however, the warehouse would be impacted immediately.
- Materials Management reported that the Distribution-Insertion operation to process billing would be severely impacted by a prolonged disruption or outage and that there is no alternate provider of the service.

- Materials Management reported that data for the Warehouse-Issuing stock process is maintained on a Windows-based, desktop PC using SAP and is backed up.
- Materials Management reported the main thing that needs to be addressed for recovery purposes is that SAMPLE processes billing (printing and inserting) backwards from everyone else in Pokipsie. If SAMPLE loses either the printers or insertion machines, no one else can process SAMPLE billing and significant revenue loss will occur.

Network Operations Center (NOC)

The following people were either interviewed or surveyed for the NOC: Rusty Staub and Randy Johnson.

Business Processes

Table 51. Business Processes Identified by the NOC

Business Process	Description
Duty supervisor	Provides callout/contact information for all SAMPLE entities in the company.
NOC special procedures	Special procedures for NOC.
BBSTP	Broadband STP information.
E911	Provides E911 procedures and re-routes.
Critter	Provides monitoring for SAMPLE sites outside Pokipsie.
Sensaphones	Provides information for Sensaphones Enterprise-wide.
Voicemail	Provides information on Oryx and Octel voice mail systems.
ASM	Provides monitoring for SAMPLE Wireless network.
One Meg Modem EMS	Provides access to 1 Meg Modem equipment Enterprise-wide.
Pokipsie DMS Switches	Provides dial tone for all Pokipsie area customers.
Scanner	Provides monitoring of State of SampleTown SATS.
State of SampleTown Video	Provides monitoring of State of SampleTown television feeds.
Escalation procedure	Define calling tree for problem response.
Skills worksheet	Update current skill level of SAMPLE technicians for each piece of equipment).
Duty Supervisor book	Maintain SAMPLE and other information about other IXCs and LECs, key personal list.
Network Operations Procedures (NOP)	Maintain common operating procedures.
Org chart	Maintain organization charts and keep current.
Maintain TFSAMPLE, MARKS records	Maintain records used to rebuild circuits to an alternate location.
Enterprise-wide 911 reroute procedures	Maintain procedures used to reroute 911 services.
Training committee	Internal group, reviews training needs.
IP test procedures	Maintain test procedures (currently under development).

Table 52. Critical Business Records Identified by the NOC

Record Name	Becomes Critical	Alternate Source	Media Type
DMS Images	< 1 Day	None	Tape
NOC Logs	< 1 Day	None	Other
Backup files for various systems	< 1 Day	None	Tape

Table 53. Regulatory Reporting Requirements for the NOC

Report	Frequency	Recipient	Type of Penalty
Site/equipment failures	Other	Management	Product/Service Disruption
FAA Site Isolation	Other	FAA & SAMPLE Reg Affairs	Financial
Status Report	Month End	SAMPLE Management	Product/Service Disruption
BVR	Month End	SAMPLE Management	Product/Service Disruption

Table 54. Operational Impacts Identified by the NOC

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	2
Competitive Advantage	4
Shareholder Confidence	2
Financial Reporting	0
Industry Image	4
Employee Morale	3
Customer Service	3
Employee Resignations	0
Vendor Relations	0
Regulatory	2
Increases in Liability	3
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 55. Number of Recovery Personnel by Day for the NOC

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
71	71	71	71	71	71	71	71	71	71

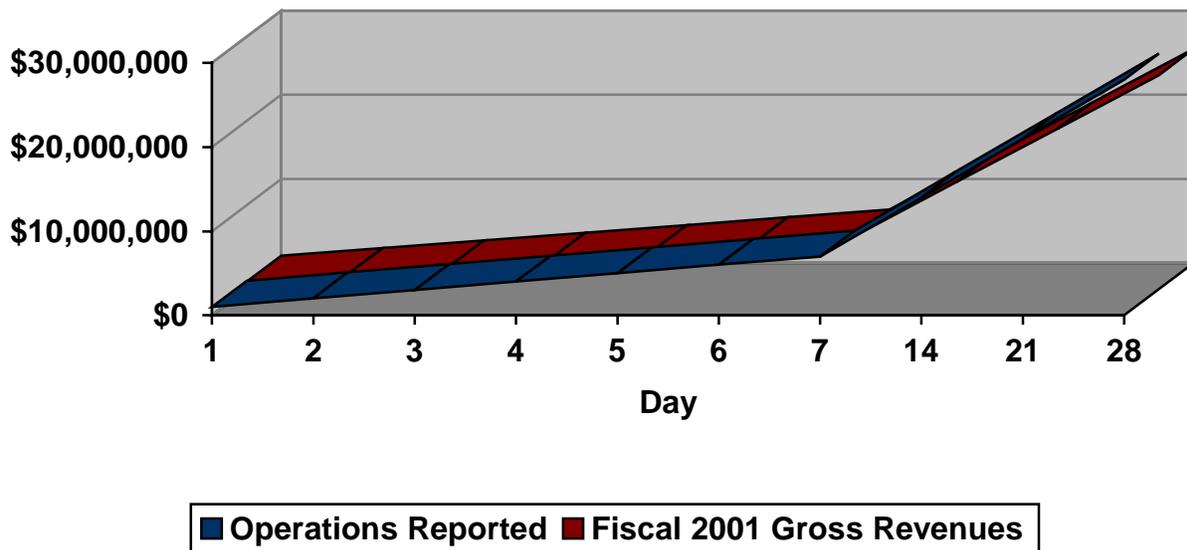
Findings

- The NOC reported that it is extremely difficult to recover from a significant disruption or outage.
- The NOC reported that they are extremely vulnerable to a prolonged disruption or outage.
- The NOC reported that it was not sure how long it would take to complete the backlog of work for each day of outage.
- The NOC reported that if their services were unavailable, it would be less than one day before a significant impact on SAMPLE occurred.
- The NOC reported that severe operational impacts would occur during the months of November through April, because of severe winter weather conditions. Impacts are also somewhat significant during September and October for the same reason.
- The NOC reported that while there is no formal records management procedure in place, they do have critical records identified, a retention period is defined, and records are duplicated and stored offsite. They also have a rotation cycle to off-site storage that is adequate for recovery.
- The NOC reported that they have approximately 170,000 customers and that all of them would seek an alternative source of service if an outage went beyond 28 days in length.
- The NOC reported that during 2002, it experienced power loss, severe weather, loss of voice communications, loss of data communications, lost or corrupted data, and the loss of local LAN servers.
- The NOC reported that the loss of Critter, Sensaphones, Scanner, and SampleTown Video, would cause significant impact during all but the summer months.

Operations

The scope of our review of SAMPLE Operations included Pokipsie, Melvin, Tucson, and Phoenix. Operations at Melvin also included Melvin/Soldotna, Smallville, Irvine and Pomona, Wartville and Pinhead. The following people were either interviewed or surveyed for Operations: Duane Mays, Ron Smith, Frank James, Jesse James, Doc Holiday, Ike Clanton, Emerson Boozer, Mike Snell, Jim Green, Rich Floweree, Sam Montini, Harry Houdini, Steve Fouts, Stevie Nicks, Veronica Hammil, Steve Howe, Pete Rose, and Joe Jackson.

Figure 4. Financial Impact for Operations



Source: Gartner, 2002

Findings

- Operations reported estimated financial losses of \$1M per day.
- 2001 Annual Gross Revenue was \$331.7M.

Business Processes

Table 56. Business Processes Identified by Operations

Business Process	Description
Assignment	Customer requests service, dispatcher determines central office out of which the service will be run.
Centrex orders	Process orders for Centrex services.
Circuit order processing	Performed using MARKS.
Construction	Perform construction necessary to perform new installs or repairs.
Directory Assistance	Provide directory assistance, 411 information.
Dispatch	Dispatch installers and repairmen, trouble tickets.
Engineering (ISP)	Design work for providing ISP services.
Fleet management (vehicles)	Purchase and maintain company cars (manual process), billing for fleet (using ARI).
Installation	Physically making connection for customer, may include construction, trenching, new equipment installation.
Inventory control	Jordash used to keep track of inventory.
IP operations	Data network operations.
Maintain circuit layout records (CLRs)	Diagrams maintained using VISIO.
Maintain customer database	Residence address terminal numbers and associated information.
Maintenance (both hardware and software)	Most done internally, traps and swears in code, to find bugs, maintain dial tone for outside plant.
Maintenance (ISP)	Supporting and maintaining ISP services.
Network management (NOC)	Monitoring, response to alarms, node management.
Operator services	Respond to Dial "0" calls.
Process adds, moves and changes	Enter using Jordash system.
Provisioning (ISP)	Provisioning ISP services.
Repair	Responding to trouble calls, splicing, etc.
TCS	Record time spent on work orders.
Testing	Customer phones in with problem, CSR performs initial diagnosis.
Trouble ticketing	Enter trouble ticket information using Remedy.
Warehousing	Maintain stock of parts for installations and maintenance.
Wireless service orders	Process orders for wireless services.
Work order processing	Work order activity performed using Jordash.

Table 57. Critical Business Records Identified by Operations

Record Name	Alternate Source	When Required	Relative Importance
Customer Information	Paper	Day 1	High
ACMPs (Cable Records)	Paper	Day 1	Medium

Table 58. Regulatory Reporting Requirements for Operations

Report	Frequency	Recipient	Type of Penalty
Outage over 500 customers for 15 minutes LEC side	On Demand	RCA Regulatory Commission	Financial
Dispatch within 72 hours, if connected by road system	On Demand	Customers	Financial
Competition—Rural Rule	On Demand	RCA	Financial

Table 59. Operational Impacts Identified by Operations

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	3
Competitive Advantage	4
Shareholder Confidence	4
Financial Reporting	3
Industry Image	4
Employee Morale	4
Customer Service	4
Employee Resignations	3
Vendor Relations	4
Regulatory	4
Increases in Liability	4
Other	4

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 60. Total Number of Recovery Personnel by Day for SAMPLE Operations

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
311	311	311	311	311	311	311	311	311	311

Table 61. Number of Recovery Personnel by Day for Operations at Pokipsie

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
90	90	90	90	90	90	90	90	90	90

Table 62. Number of Recovery Personnel by Day for Operations at Tucson

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
59	59	59	59	59	59	59	59	59	59

Table 63. Number of Recovery Personnel by Day for Operations at Phoenix

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
39	39	39	39	39	39	39	39	39	39

Table 64. Number of Recovery Personnel by Day for Operations at Melvin

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
52	52	52	52	52	52	52	52	52	52

Findings

- Operations estimated financial losses of \$1M per day; 2001 Annual Gross Revenue was \$331.7M.
- Operations reported that they are not vulnerable to a prolonged disruption or outage.
- Operations reported that it is relatively easy to recover from a significant disruption or outage.
- Operations reported that it would take more than 16 hours to complete the backlog of work for each day of outage.
- Operations reported that it would be less than one day before a significant impact on SAMPLE occurred as a result of Operations being unavailable.
- Operations reported that severe operational impacts would occur during the winter months due to extreme weather. Impacts would also be significant during June through August, due to the tourist season.
- Payroll processing is critical and employees must be paid on each Tuesday following the two-week payroll cycle.

- Operations stated that a loss of communications would have a significant impact on business operations, as well as emergency services. Tariffs call for same level of service for everyone, but SAMPLE wisely provides priority service to the FAA and Police (911) applications.
- Operations estimated that if a switch in one of the COs was destroyed, it could take 30-60 days to recover. It could take \$3-5M to rebuild a main CO.
- Operations groups maintain hardcopies of records, including cable and circuit maps, which can be used in the event that computer systems are unavailable.
- Operations has an aging work force and is expecting several employees to retire within the next five years.
- Smallville Operations reported that they have a high risk of experiencing a prolonged disruption or outage. A cable in Atka was cut by a jack hammer by surveyors installing a monument marker.
- Tucson Operations reported that they experienced a major fiber cut on Van Horn Road that resulted in a significant outage. They also reported that lightning strikes affect remote connections at times. Tucson also reported 10 power outages in the past year, but service was maintained via UPS in all cases.
- Tucson reported that they could lose up to 640 customers if one of the “huts” went away; the largest one could affect up to 1,200 customers. The main Tucson switch supports 44,000 customers.
- Tucson reported that the top two most likely disasters that would result in a prolonged disruption or outage are fire and earthquakes.
- Tucson reported that they have a two-hour response time on the switch that supports the hospital.
- Tucson tests backup generators once a week (every Thursday in the main exchanges); UPS batteries are tested every three months. A power engineer at Tucson maintains the batter records for the entire state.
- Tucson maintains 54,000 access lines. Clients who experienced an outage caused by a 2,400 pair cable cut were restored to service within six to seven hours.
- Tucson reported that it costs \$1,800 and five hours (plus two hours lag time) to respond to a trouble call in the bush.
- Tucson reported that they conduct safety meetings once a month to review potential disaster recovery scenarios.
- Within four years, every member of the Operations staff at Tucson will hit retirement age, creating a risk of critical knowledge loss.
- Wartville Operations reported they experienced a two-week power outage due to dead trees blowing over. The bulk of affected customers were restored to service within three days.

- Wartville Operations believes that a volcano on Augustine Island may blow, causing significant service disruption. There are 7700 subscribers in the Wartville and Pinhead regions.
- Phoenix Operations is highly focused on customer service. All staff are being trained to be Cisco Certified Network Planners (CCNPs), in preparation for the conversion to IP telephony.
- Phoenix had a CO go down for two hours due to aging/deterioration of the UPS batteries. A voltage spike tripped the 100-amp breakers, and it took two hours to restore service. Phoenix has battery plants on preventative maintenance now.
- Phoenix experienced an outage caused by rockslide, but service was restored in four hours.
- Phoenix has a portable generator that can be transported where needed.
- Phoenix sees increased activity/telephone usage during the summer months, due to the cruise ship business (tourism).
- Melvin Operations experienced a windstorm that knocked primary power out for three or four weeks; however, Melvin/Sherman maintains a Diesel generator with 250 gallons of fuel. Melvin and North Melvin maintain natural gas fueled generators. Melvin experiences three primary power outages per winter, on average.
- Melvin has experienced ferrous ash-induced shorts of electrical circuits resulting from volcanic activity.
- Melvin sits on a fault line and experiences minor earthquakes every day.
- Melvin has also experienced flooding due to glacial melting.
- Switches are fully redundant and in secure facilities.
- Pomona experiences few power outages; their largest risk would come from earthquakes and tidal waves. The COs are located above the high tide marks for the 100-foot level.
- Pomona Island would not be able to operate if they lost communications. Their weak link is a satellite link. In an emergency, Coast Guard radio links would be used if both LD links were down.
- Pomona has the largest Coast Guard base in the United States. There are 14,000 subscribers and 10,000 access lines.

Plant Assignment and Dispatch (Provisioning)

The following people were interviewed for Provisioning: Sparky Anderson, Pete Rose, Johnny Bench.

Business Processes

Table 65. Business Processes Identified by Provisioning

Business Process	Description
Order entry	Created in Cornbell, AHD, MARKS (interstate circuits).
Address research	Establish legal address for customer working with the municipality or city boroughs.
LMP provisioning	Assess NPAC.
Residential provisioning	Residential provisioning.
Centrex circuits	Provisioning of Centrex service and local or interstate circuits.
Field or CO activity	Interfaces with Clicksoft calendar.
PBX	Business, Key, or PBX service requests.

Table 66. Critical Business Records Identified by Provisioning

Business Unit	Record Name
Provisioning	Jordash, Cornbell, MARKS, Clicksoft, Switchaccess

Table 67. Regulatory Reporting Requirements for Provisioning

Business Unit	Report	Frequency	Recipients
Provisioning	None		

Table 68. Operational Impacts Identified by Provisioning

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	0
Competitive Advantage	0
Shareholder Confidence	0
Financial Reporting	0
Industry Image	0
Employee Morale	0
Customer Service	4
Employee Resignations	0
Vendor Relations	0
Regulatory	0
Increases in Liability	4
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 69. Number of Recovery Personnel by Day for Provisioning

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
0	0	0	0	0	0	0	0	0	0

Findings

- Provisioning reported it will take more than 16 hours to process backlog for each day of downtime.
- Provisioning reported that it is vulnerable to a prolonged disruption or outage.
- Provisioning reported that it would be extremely difficult to recover from a significant disruption or outage.
- Provisioning stated that one day would be the maximum outage before a significant impact on SAMPLE occurred.
- Provisioning reported that severe operational impacts would occur to customer service and there would be increased liability if they were unable to update E911 information to PSAP.

- Provisioning reported that it has need for large screen (21-inch) monitors, but cannot afford the estimated \$80,000 cost to upgrade.
- Provisioning reported that a loss of communications would have a significant impact on business operations.
- Provisioning reported that there is a need to consolidate the multiple, disparate systems that are in use today.

Purchasing

The following people were surveyed for Purchasing: Carlton Fisk and Mike Socia.

Business Processes

Table 70. Business Processes Identified by Purchasing

Business Process	Description
Negotiate and purchase goods and services	Negotiate with vendors and place orders for goods and services.
Maintain the contract system and records	Update the Contract Manager system, file contracts.
Assigned block(s) of manual purchase requisition, purchase order, and/or contract numbers to each buyer.	Buyer(s) will maintain a log of numbers assigned and the associated data, i.e., date(s), vendor/contractor names, goods or services requested or purchased, cost, etc.
Maintain a master log of purchase requisition, purchase order, and/or contract numbers and associated data assigned by individual buyers.	Purchasing's administrative assistant will maintain the master log data.
Input manual data to the computerized system when computerized materials system(s) become available.	Buyers and administrative personnel will be responsible for input of manual data to a computerized system.
Establish and maintain a list of vendors and contractors, points of contact, goods and services each can provide.	Purchasing and technical personnel will be responsible for providing the data about vendors and contractors.
Maintain and update vendor and contractor listing on an ongoing basis.	Responsibility for maintenance and update of this type data needs to be determined.

Table 71. Critical Business Records Identified by Purchasing

Business Unit	Record Name	When Required	Media Type	Alternate Source
Purchasing	Vendor contact names and numbers	Day 1	Other	Search the Internet for vendors
Purchasing Department	Purchase Order	Day 2	Paper	Seven years of archived paper records
Purchasing Department	Purchase Requisition	Day 2	Paper	Seven years of archived paper records
Purchasing Department	Contract	Day 2	Paper	Archived records
Purchasing Department	Vendor/ Contractor Master List	Over Day 28	Tape	None
Purchasing Department	Request for Quotation	Day 2	Paper	Seven years of archived paper records

Table 72. Regulatory Reporting Requirements for Purchasing

Business Unit	Report	Frequency	Recipients
Purchasing	None		

Table 73. Operational Impacts Identified by Purchasing

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	4
Competitive Advantage	4
Shareholder Confidence	2
Financial Reporting	4
Industry Image	2
Employee Morale	2
Customer Service	4
Employee Resignations	2
Vendor Relations	4
Regulatory	4
Increases in Liability	4
Other	3

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 74. Number of Recovery Personnel by Day for Purchasing

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
12	12	12	12	12	12	12	12	12	12

Findings

- Purchasing reported it will take one day to process backlog for each day of downtime.
- Purchasing reported it is somewhat difficult to recover following a significant disruption.
- Purchasing stated that one week is the maximum length of outage before a significant impact on SAMPLE business units occurred.
- Purchasing reported that operational impacts would be no more severe for any single month over any other.

- Purchasing noted there is currently no recovery strategy in place for the list of vendors and contractors and their respective points of contact.
- Purchasing reported that data loss or corruption was experienced in April of 2002, which caused a 10-percent impairment to operations and took eight hours to recover.
- Purchasing reported they were somewhat vulnerable to an outage.
- In a “worst case” scenario, Purchasing could be idled for up to a week before significant impact to SAMPLE would occur.
- Purchasing reported that standard replacement office equipment would cost \$28,060 for each day following a significant disruption.

Regulatory Affairs

The following person was surveyed for Regulatory Affairs: Sandy Kofax.

Business Processes

Table 75. Business Processes Identified by SAMPLE Regulatory Affairs

Business Process	Description
License administration	Maintain and administer FCC license files.
Monitoring	Monitor state and federal regulatory activity.
Regulatory response	Provide response to FCC and RCA customer complaints.
Legal support	Support Legal Department as needed.
Tariff administration	Draft tariffs for submission to appropriate agency.
Regulatory interpretation	Provide interpretation of tariffs, state and federal regulations to company.
Records maintenance	Maintain regulatory and tariff files.
Records maintenance	Maintain competitive tariffs.
Records maintenance	Maintain copies of special contracts filed with the RCA.
Coordination of filings	Coordinate filings to the RCA and FCC on behalf of SAMPLE.
Outage reporting	Report network outages to both FCC and RCA.
Outage reporting	Report tower outage to the FAA/FCC within 30 minutes.

Table 76. Critical Business Records Identified by Regulatory Affairs

Business Unit	Record Name	When Required	Media Type	Alternate Source
Regulatory Affairs	Local exchange tariffs	Over day 28	Other	Electronic version on SAMPLE Intranet, filed versions with the Regulatory Commission of SampleTown, Federal Communications Commission
Regulatory Affairs	License and antenna structure registrations for microwave, cellular, television and PCS licenses	Over day 28	Other	FCC

Table 77. Regulatory Reporting Requirements for Regulatory Affairs

Report	Frequency	Recipient	Type of Penalty
FAA tower outage reporting	Other	FAA	Financial—could also include license revocation
Outage reports—network notification	On Demand	FCC	Product/service disruption
Outage reports	On Demand	RCA	Product/service disruption

Table 78. Operational Impacts Identified by Regulatory Affairs

Operational impacts are rated on a scale of 0-4 where 0 = no impact and 4 = severe impact. The impact value is an indication of the severity of the impact to the company that would result if the business unit were unable to function.

Operational Impact	Value
Cash Flow	0
Competitive Advantage	0
Shareholder Confidence	0
Financial Reporting	0
Industry Image	0
Employee Morale	0
Customer Service	0
Employee Resignations	0
Vendor Relations	0
Regulatory	2
Increases in Liability	2
Other	0

The number of recovery personnel by day represents the number of internal personnel resources that the business unit may require to support minimal essential operations following a major disruption.

Table 79. Number of Recovery Personnel by Day for Regulatory Affairs

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
1	1	1	1	1	1	1	2	3	5

Findings

- Regulatory Affairs reported that they have files dating back to the beginning of the SAMPLE company(ies). Many of these historical documents are available only in hard copy form and at the Regulatory Commission of SampleTown or Federal Communications Commission archives. A catastrophic event could destroy both copies.
- Regulatory Affairs reported that there are no monthly operational impacts.
- Regulatory Affairs reported no standalone workstation requirement.

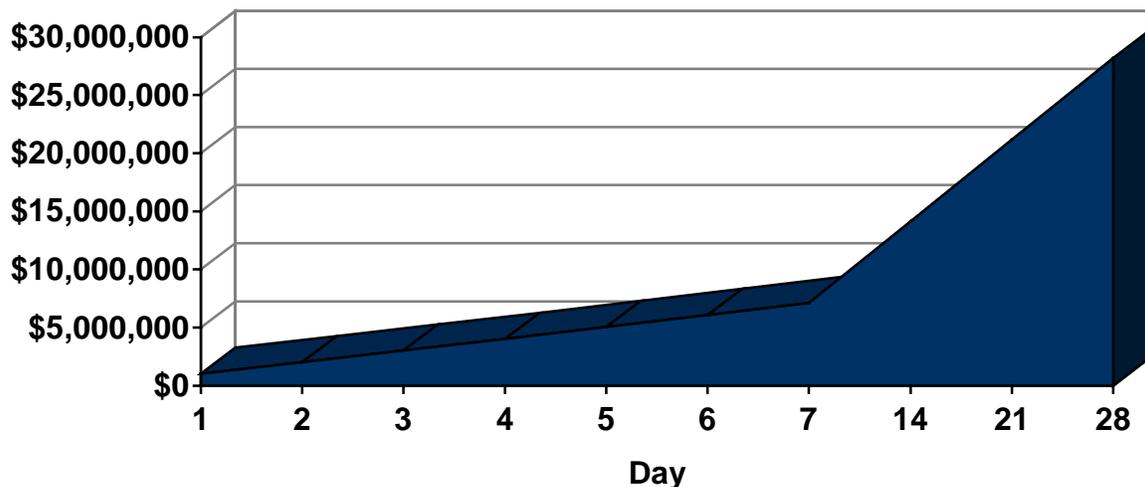
Executive Summary/Business Impact Analysis for SAMPLE

The BIA is designed to provide management with a report of the potential overall effects for each major SAMPLE business unit, if their services are not available for 30 days or more. Since the cost of providing redundancy and fault tolerance in the infrastructure can be quite high, it is important that management have a very clear vision and commitment of resources to accomplish the job. The intent of the following section is to provide a cumulative report of impact across all of the SAMPLE business units. This cumulative impact information can be applied toward justification and prioritization of infrastructure-related resources that would be required.

Cumulative Reported Financial Impacts

The following figure shows the cumulative financial impact reported by all the SAMPLE business units.

Figure 5. Reported Financial Impacts for SAMPLE



Source: Gartner, 2002

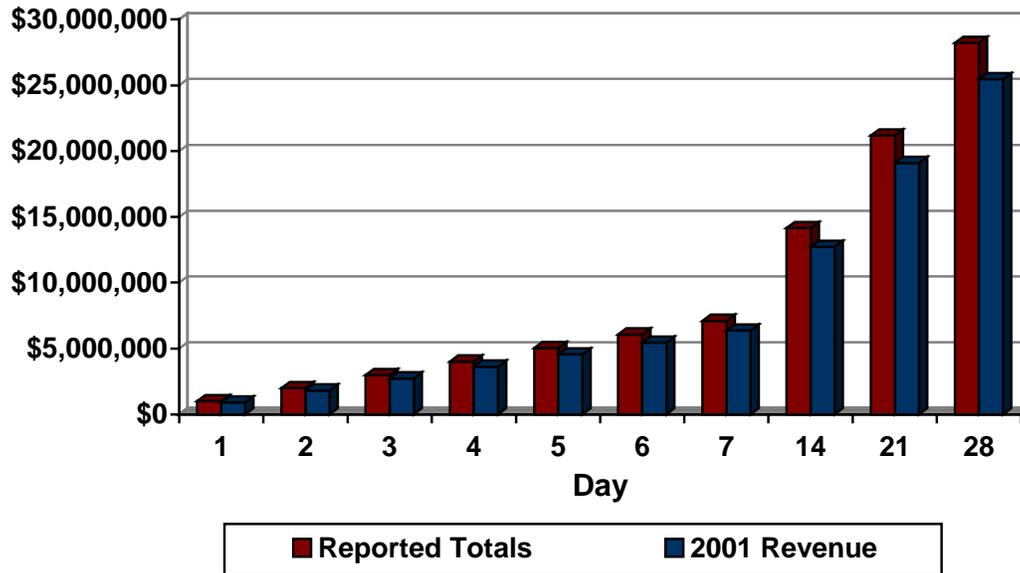
Findings

- The reported cumulative financial impact ranges from \$1M on the first day (\$5,035,616 for the first week) to approximately \$28,249,312 on Day 28.

Cumulative Financial Impact (2001 Gross Revenue)

Figure 6 shows the reported impacts (see previous page) and 2001 gross revenue, with a range of \$908,767 on the first day to approximately \$25,445,479 on Day 28.

Figure 6. Reported Impacts and 2001 Revenue for SAMPLE



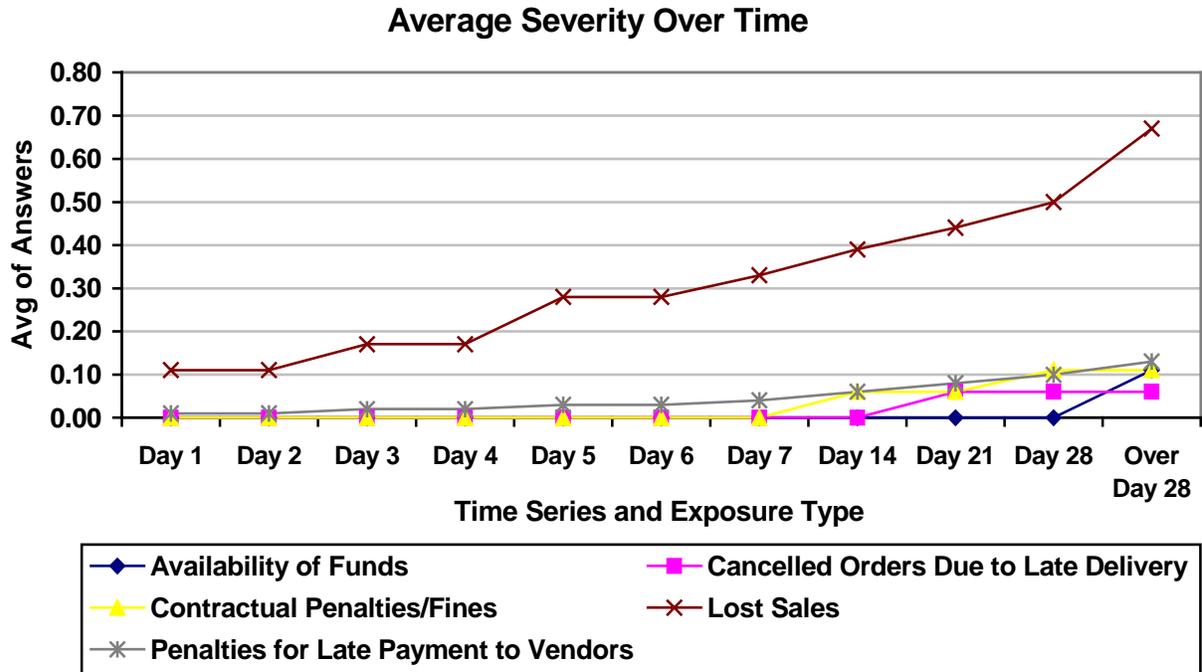
Source: Gartner 2002

Based on survey results, the company's major financial exposures would begin to increase dramatically within four to seven days following a major disaster. Financial impact for the corporation is estimated using a percentage of 2001 reported revenue and applied to this projected escalation.

Cumulative Reported Financial Impacts

The following figure shows how the major financial exposures escalate over time for the business units.

Figure 7. Reported Financial Impacts for SAMPLE



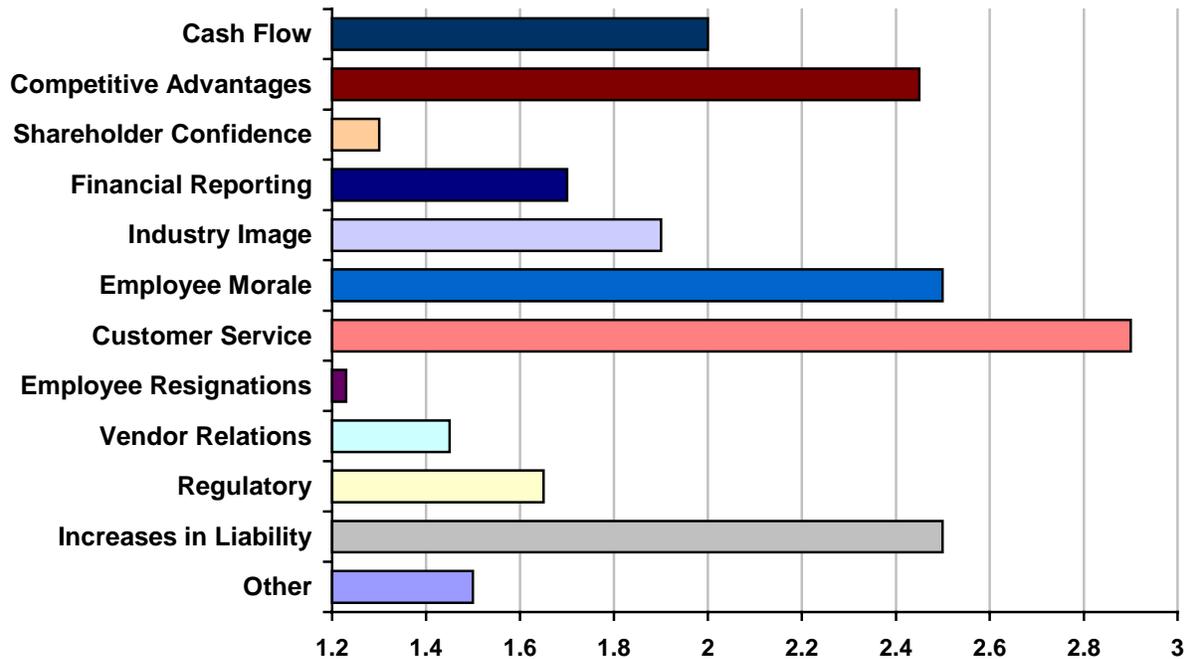
Source: SAMPLE 2002

Based on survey results, the company's major financial exposures would begin to increase dramatically within four to seven days following a major disaster. Financial impact for the corporation is estimated using a percentage of 2001 reported revenue and applied to this projected escalation.

Operational Impact Summary

Operational impacts are intangible and cannot be directly quantified; however, all business units were asked to rate 12 operational factors (shown below) on a scale from 0-4, where 0 indicates "no impact" and 4 indicates "severe impact."

Figure 8. Average Operational Impacts for SAMPLE



Source: Gartner 2002

Findings

- Customer service is clearly a priority for SAMPLE as shown above, and all of the business units were concerned about customer service impact during a disaster situation.
- A disaster's effects on employee morale, financial reporting, employee resignations, regulatory reporting and shareholder confidence were also important concerns.

Recovery Personnel Requirements

Table 80 summarizes the overall recovery personnel requirements for SAMPLE, as reported by the business units.

Table 80. Overall Personnel Requirements for SAMPLE

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 14	Day 21	Day 28
Personnel	560	564	572	596	605	606	607	618	640	647

Source: Gartner 2002

Findings

- According to survey respondents and interviewees, SAMPLE would need roughly 780 persons during the recovery period in the 30 days following a significant disruption or outage, just to maintain service. The total number of SAMPLE employees is approximately 1,168. Based on our experience, most emergency operations for communications services providers require a minimum of 25 percent of total personnel to implement a timely recovery from a major disaster on the first day. This number will typically grow to 40 percent by the end of the first week to support critical business operations after systems and workspace are operational.
- Based on information obtained in the interviews, we believe that many SAMPLE employees are capable of functioning out of their homes or personal vehicles, as long as they are able to get to where the work is needed. Most employees that we interviewed indicated that they have their own tools and could locate spare parts at various locations, if needed.

Recovery Time Frames Summary

In general, there are service recovery time frames specified by Tariff, for the various SAMPLE service locations. Based on the interviews, we believe that reasonable recovery time frames are generally shorter for all business units and services, because of SAMPLE' emphasis on customer service, as previously shown by the operational impact summary. Availability of emergency services such as Police 911, FAA installations and hospitals, is a critical first priority for all SAMPLE business units.

Physical security is essential during a disaster to assist in securing the site, so Facilities and Safety/Risk Management must be available on short notice for that reason. Facilities and Marketing are also critical to potentially find alternate office space and communicate with the media during a disaster. SAMPLE IT Operations, especially the information systems/technology and infrastructure recovery, needs to be available quickly to provide technology support to the other business units, especially customer support for telephone re-routing and alternate/replacement computer systems.

Recovery Priority Recommendations

Based on the interviews, we recommend the following recovery priorities.

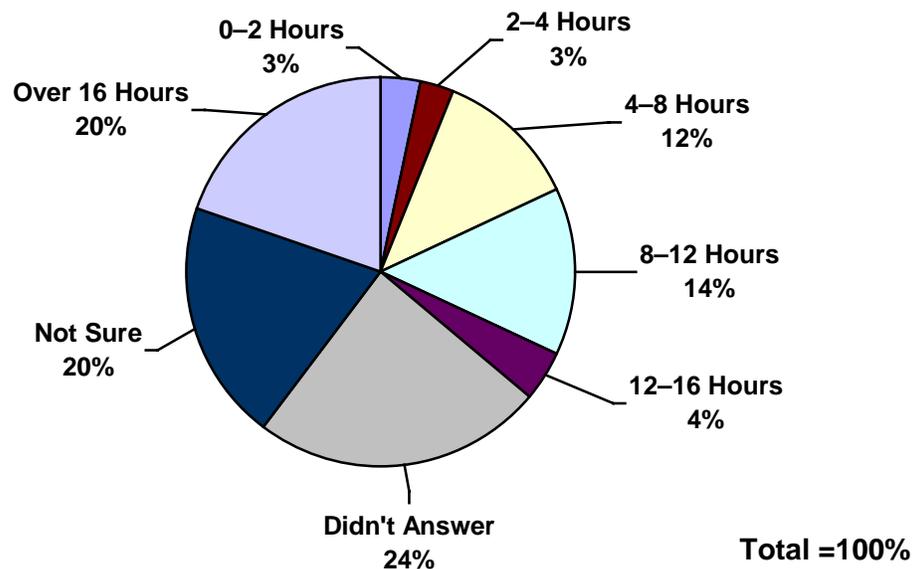
Table 81. Recommended Recovery Priorities for SAMPLE

Priority	Process	Business Unit
1	Employee issues, physical safety, temporary shelter, benefits administration, etc. (SAMPLE cannot operate without its employees; their safety must be the first priority, or nothing else will matter.)	Human Resources
2	Infrastructure to support customer service telephones	Customer Care
3	Repair, assignment, testing, dispatch functions	Operations
4	Engineering	Engineering
5	Provisioning	Plant Assignment and Dispatch
6	Monitor/assess network/circuit/service health	NOC
7	Procure temporary resources, emergency services, equipment, facilities, etc.	Purchasing

Work Backlog Processing

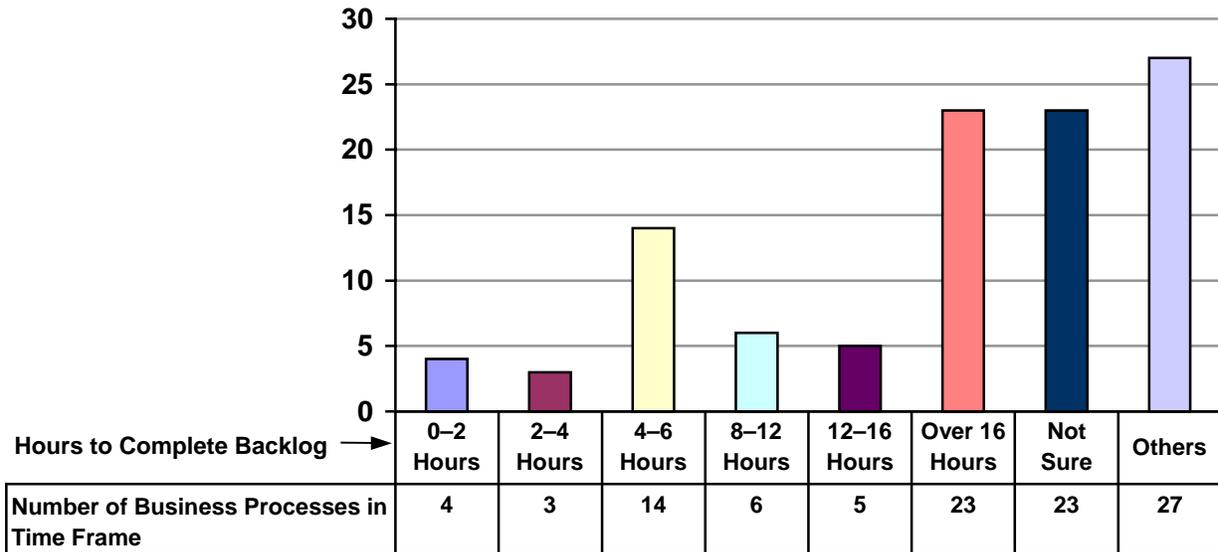
Figure 9 shows the length of time to complete backlog processing for all of the reported business processes for each affiliate company and shared service, assuming that workspace and computer systems are available.

Figure 9. Time to Complete Backlog Processing for SAMPLE



Source: Gartner 2002

Figure 10. Time Frame and Number of Processes for SAMPLE



Source: Gartner 2002

Findings

- Backlog processing is used to define how long it will take to update computer systems and documentation to current status.
- All business processes, with exception of “Others” shown above, can complete backlog processing within three days, assuming that workspace, computer systems and infrastructure are available.
- It is important to understand how transaction backlogs will be handled by the business units. A slower recovery capability may require a reduction in the Recovery Time Objective (RTO).

Critical Business Records

The following is a list of the critical business records reported by the business units and shared services.

Table 82. Critical Business Records for SAMPLE

Business Unit	Critical Records
Comp, Ben, HRIS	Personnel Files
Comp, Ben, HRIS	HRIS data
Comp, Ben, HRIS	Compensation surveys
Comp, Ben, HRIS	Analysis tools
Comp, Ben, HRIS	Vendor contacts

Business Unit	Critical Records
Comp, Ben, HRIS	Benefits and leave files
Corporate Communications	None
Customer Care	Cornbell Service order system,
Customer Care	CBP billing system,
Customer Care	JORDASH system, DA
Customer Care	Listings/ records system.
Facility Services	None
Facility Services	PCSC Security System Software Database
Facility Services	Hard copies of Security User Form records
Facility Services	Facility drawings, both Mylar and Blueines
Facility Services	Facility Construction and Maintenance Project records
Finance	SAP data
Finance	Deville/ CBP
Finance	Payroll files
Finance	Month-end JEs
Finance	Infranet
Finance	Apprise sales
Finance	PSA
Finance	NIBS
Finance	Rodolphi
Finance	Great Lakes
Finance	PRS
Finance	STS
Finance	PCC
Finance	Historical financial information
Finance	AIS system information
Finance/ AP & Payroll	Time records
Finance/ AP & Payroll	Vendor Invoices
Finance/ AP & Payroll	Employee Records
Human Resources	Job Description
Human Resources	Requisition
Human Resources	Training Vendor Contacts
Marketing	None
Materials/Operations	Distribution—None
Materials/Operations	Warehouse transactions
Network Operations Center (NOC)—110/ 642	DMS Images
Network Operations Center (NOC)—110/ 642	NOC logs

Business Unit	Critical Records
Network Operations Center (NOC)—110/ 642	Backup files for various systems
Operations	None
Plant Assignment and Dispatch	None
Purchasing	Vendor contact names and numbers
Purchasing	Purchase order
Purchasing	Request for quotation
Purchasing	Purchase requisition
Purchasing	Contract
Purchasing	Vendor/Contractor master list
Regulatory Affairs	Local exchange tariffs
Safety/ Risk Mgt	None
Sales	Customer database

Findings

- Critical business record requirements should be reviewed to ensure that all business units could successfully implement a Business Continuity Plan (BCP).
- Each business unit should determine whether their critical records should be copied (or imaged) and available at off-site storage or obtained from the public record facility. Note that this procedure should be documented in each business unit's BCP.
- Some critical business records, such as customer address information, can be recovered from the switch. Each affected business unit should document all critical business records in its BCP.

Regulatory Reporting

The following is a list of the regulatory reports by the business units and shared services.

Table 83. Regulatory Reports for SAMPLE

Business Unit	Report	Recipient	When Required
Comp, Ben, HRIS	5500 Filing	IRS	Year end
Comp, Ben, HRIS	EEO reporting	DOL	On demand
Comp, Ben, HRIS	Plan and amendment filing	DOL	On demand
Comp, Ben, HRIS	PBGC filing	PBGC	Year end
Corporate Comm	None reported		
Customer Care	None reported		
Facility Services	None reported		
Finance	SEC quarterly and annual	SEC	Quarter end

Business Unit	Report	Recipient	When Required
	reporting		
Finance	Form M annual reports	RCA	Year end
Finance	USF/ RCC reports	FCC/ AK Dept Rev.	Month end
Finance	CAM	FCC—RCA	Year end
Human Resources	EEO1	US DOL	Year end
Human Resources	Affirmative Actions Report	US DOL	Year end
Marketing	None reported.		
Materials Management	None reported		
NOC	Site/ equipment failures	Management	Other
NOC	FAA Site Isolation	FAA & SAMPLE Reg Affairs	Other
NOC	Status Report	SAMPLE Management	Month end
NOC	BVR	SAMPLE Management	Month end
Operations	Outage over 500 customers for 15 minutes LEC side	RCA Regulatory Commission	On demand
Operations	Dispatch within 72 hours, if connected by road system	Customers	On demand
Plant Assignment and Dispatch	None reported		
Purchasing	None reported		
Regulatory Affairs	FAA tower outage reporting	FAA	Other
Regulatory Affairs	Outage reports—network notification	FCC	On demand
Regulatory Affairs	Outage reports—network notification	RCA	On demand
Safety/ Risk Mgt	OSHA 300	OSHA	Year end
Sales	None reported		

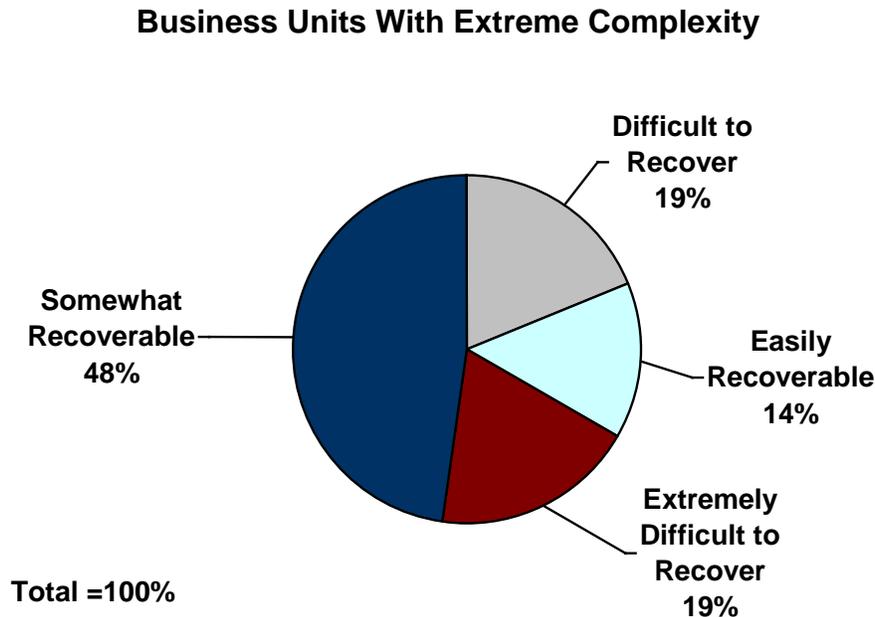
Findings

- In the event of a disaster, the FCC and the RCA must be advised of the problem, and the notification procedure should be part of SAMPLE's BCP.
- Although it may not be strictly required by a regulatory agency, it is a best practice for each affected business unit to include a notification procedure as part of its BCP.

Recovery Complexity for Business Units

The following graph shows the recovery complexity reported by the business units and shared services.

Figure 11. Recovery Complexity for SAMPLE



Source: Gartner, 2002

Table 84. Recovery Complexity for SAMPLE

Easily Recoverable	Somewhat Difficult to Recover	Difficult to Recover	Extremely Difficult to Recover
<ul style="list-style-type: none"> ■ Sales ■ Facilities 	<ul style="list-style-type: none"> ■ Customer Care ■ Marketing ■ Materials Management ■ Operations ■ Purchasing ■ Safety and Risk 	<ul style="list-style-type: none"> ■ AP and Payroll ■ Finance ■ Human Resources ■ Regulatory Affairs 	<ul style="list-style-type: none"> ■ Corporate Communications ■ Engineering ■ NOC ■ Provisioning

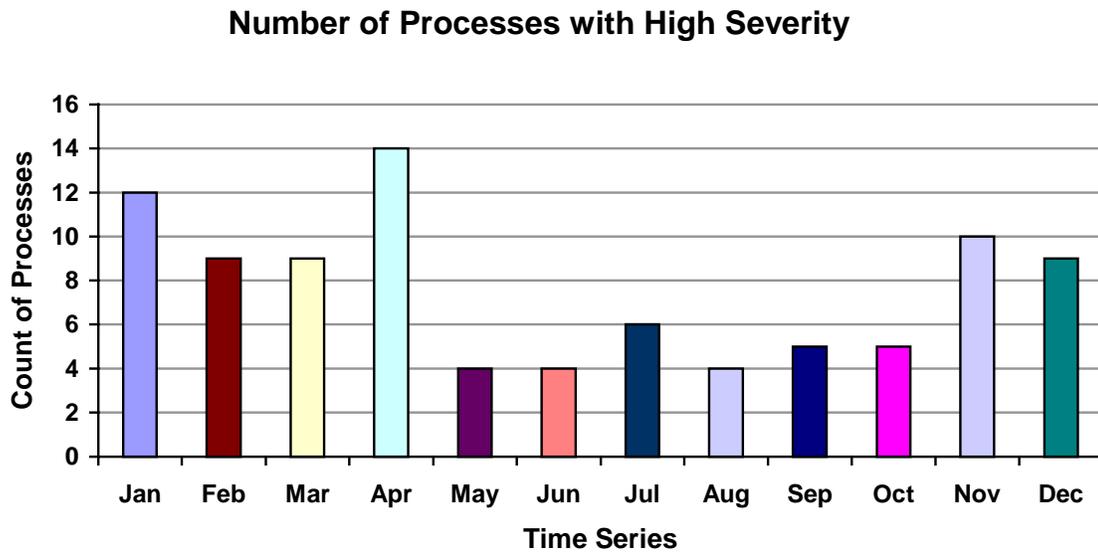
Findings

- Communications reported that it would be extremely difficult to recover from a prolonged outage or disruption.
- Customer Care reported that it is somewhat difficult to recover after a significant disruption or outage.

- Engineering reported that it would be extremely difficult to recover from a significant disruption or outage if AutoCAD data was lost.
- Facility Services reported that it is somewhat easy to recover.
- Finance reported that it is difficult to recover.
- AP and Payroll reported that it is difficult to recover.
- Human Resources reported that it is difficult to recover from a significant disruption or outage.
 - Safety and Risk reported that it is somewhat difficult to recover following a significant disruption or outage.
- Marketing reported that it is somewhat difficult to recover from a prolonged disruption or outage for information that is not backed up for individual PCs and mainframe applications.
 - Customer Care reported that it is somewhat difficult to recover after a significant disruption or outage.
 - Sales reported that it is easy to recover.
- Materials Management reported that it would be somewhat difficult to recover from a significant disruption or outage.
- The NOC reported that it is extremely difficult to recover from a significant disruption or outage.
- Operations reported that it is relatively easy to recover from a significant disruption or outage.
- Operations estimated that if a switch in one of the CO's was destroyed, it could take 30 to 60 days to recover. It could take \$3-5M to rebuild a main CO.
- Provisioning reported that it is extremely difficult to recover from a significant disruption or outage.
- Purchasing reported that it is somewhat difficult to recover following a significant disruption.
- Sales reported that it is easy to recover.

The following figure shows the monthly impact profile reported by the business units.

Figure 12. Monthly Impact Profile for SAMPLE



Source: Gartner, 2002

Findings

- November, December, January, February, March and April processes are higher than average because SAMPLE reported that an outage during these months would have higher impact due to extreme weather.
- Based on Gartner’s experience, the company’s BCPs must support the monthly impact profile.

Special Requirements

The table below lists the special or one-of-a-kind recovery supply requirements reported by the business units and shared services.

Table 85. Special Resource Requirements for SAMPLE

Business Unit	Resource Description	Comment
AP	MICR Printers	Est. \$5000 ea.

Findings

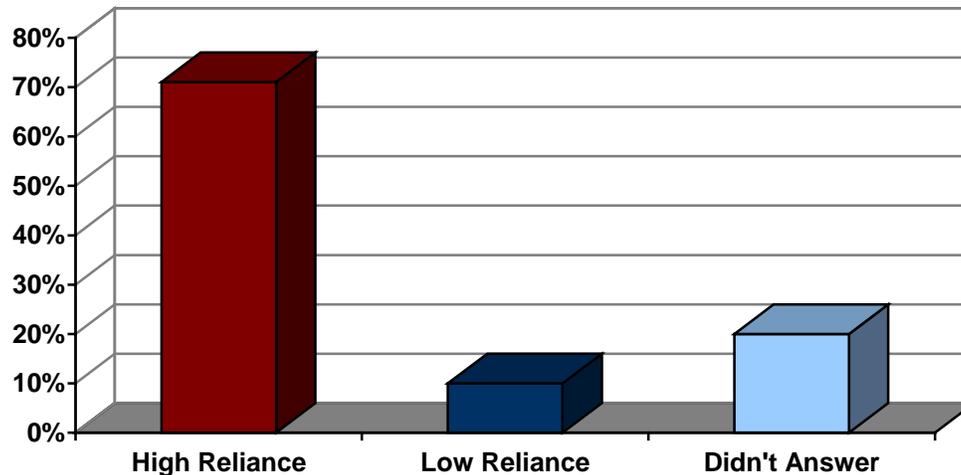
- Each business unit should review all special requirements. If appropriate, supplies should either be documented as available off-site (such as check stock for Payroll), or a procedure for an emergency purchase should be included in the BCP.

Reliance on Communications

One of the factors reviewed during the interview process (see Appendix A, question 12) was the reliance on communications by each business unit, with a rating of 0-4 where 0 indicated “No impact” and 4 indicated “Severe impact.”

Several business units reported a “Severe impact” on the loss of communications, which is especially important for business units that provide customer service.

Figure 13. Degree of Reliance Upon Communications Services



Source: Gartner, 2002

Findings

- More than 70 percent of SAMPLE business units reported a high reliance upon communications systems.
- There was a consistent high-level emphasis by all business units on customer service, which is directly supported by communications, especially the telephones in Customer Care. It is a best practice to have a communications team defined as one of the “support” teams (like HR, Safety, etc.) to ensure that communications arrangements have been implemented as part of the BCP.
- It was reported that while radios were once installed in telephone company trucks belonging to the Municipality of Pokipsie, they were not included in the sale of ATU to SAMPLE. It was also reported that the SAMPLE NOC does not have a backup for voice communications. The use of radios as a possible backup means of communicating in an emergency should be evaluated.

Unique Standalone Workstations

Table 86 lists the unique standalone workstation requirements reported by the SAMPLE business units.

Table 86. Standalone Workstation Requirements for SAMPLE

Business Unit	Description of Critical Information	Processes
Facility Services	Structural, mechanical, electrical	Facility maintenance

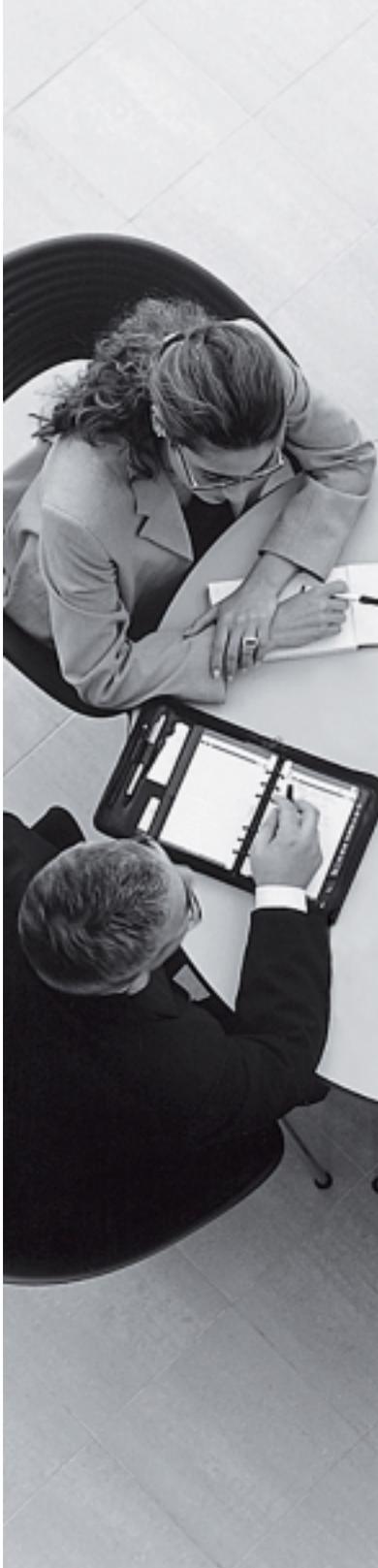
Findings

- Each business unit should review all unique standalone workstation requirements. If appropriate, a procedure for an emergency purchase should be included in the BCP.

Conclusion

Gartner found that all SAMPLE business units are heavily dependent on the existing infrastructure, including communications resources. The telephone systems, the network, and critical applications that depend on the network should be considered by all SAMPLE business units during future disaster recovery and business continuity planning efforts.

Given that the various SAMPLE operations groups are relatively diverse, geographically dispersed and somewhat independent in the way they operate, it will be necessary for SAMPLE management to provide clear vision, leadership, and a commitment of resources to ensure recovery and continuity of operations for each business unit. Successful future recovery efforts will depend on planning and coordination activities that must take place well in advance of actual disaster situations.



Appendix

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Appendix A—BIA Questions

1. **Business processes**—What are the business processes for your business unit? Recovery time frames for business unit or process?
2. **Work backlog**—For each process above, how long will it take (in hours) to handle the backlog for each day of downtime? Concurrent or sequential backlog processing?
3. **Critical record management**—Identify critical business records by record name, alternate source (when required), media type.
4. **Regulatory reporting**—Does business unit have any regulatory reporting requirements? List report name, recipient, frequency, variance, type of penalty (amount, if any).
5. **Restoration complexity**—Define restoration complexity as easily recoverable, somewhat recoverable, difficult to recover, extremely difficult to recover.
6. **Outage tolerance**—Under the worst-case scenario, how long (hours or days) could your business unit be completely idled before it would have a significant impact on SAMPLE as a whole, business units, business partners, regulatory compliance?
7. **Monthly impact profile**—For each month, define the severity of outage where 0 = no impact, 4 = severe impact.
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
What type of impact for each of the above: financial, operational and other?
8. **Operational impact factors**—For the following operational impacts, define the severity of impact where 0 = no impact, 4 = severe impact.
Cash flow, competitive advantage, shareholder confidence, financial reporting, industry image, employee morale, customer service, employee resignations, vendor relations, regulatory, increases in liability, other.
9. **Cumulative estimated financial impacts by day**—Estimate the financial impact on your business unit under the worst-cast scenario by days/weeks as follows:
Day 1 2 3 4 5 6 7 14 21 28
10. **Special requirements**—Identify any special or one-of-a-kind supply requirements with name of resource (forms, etc.), supplier, days to acquire, quantity.
11. **Number of people required by day**—Identify the number of people required by day for entire business unit recovery.
Day 1 2 3 4 5 6 7 14 21 28

12. **Reliance on communications**—Identify reliance on loss of communications, such as telephones, e-mail, etc., where 0 = no impact, 4 = severe impact.
13. **Unique standalone workstations**—Identify unique standalone workstations or similar requirements (e.g., wire transfer, etc.). Define name/type of workstation, quantity, description of critical process.
14. **Other issues and concerns**—Identify any other issues or concerns about recovering your business unit that have not been discussed.

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