Novel Connect
Case Study

Novel Connect Case Study

The Novel Connect Case Study was prepared for use in the 2008 Malcolm Baldrige National Quality Award Examiner Preparation Course. The Novel Connect Case Study describes a fictitious manufacturing organization. There is no connection between the fictitious Novel Connect organization and any other organization, either named Novel Connect or otherwise. Other organizations cited in the case study also are fictitious, except for several national and government organizations. Because the case study is developed to train Baldrige Examiners and others and to provide an example of the possible content of a Baldrige application, there are areas in the case study where Criteria requirements are not addressed. This case study is based on the 2008 Criteria for Performance Excellence, which is used by both business and nonprofit organizations.

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Malcolm Baldrige National Quality Award

1. Applicant

Official Name Novel Connect, Incorporated

Headquarters Address 414 Merlin Drive

Other Name Novel Connect

Rochester, NY 14602

Prior Name

Has the applicant self-certified for eligibility in a prior year(s)?

☐ Yes   ☒ No   ☐ Do Not Know

If "Yes," indicate the year(s) in which the applicant submitted the Eligibility Certification Package and the name(s) of the applicant at that time, if different.

Year(s)

Name(s) of Applicant

2. Highest-Ranking Official

☐ Mr. ☐ Mrs. ☒ Ms. ☐ Dr.

Name Maria Bell

Address 414 Merlin Drive

Title CEO/President

Rochester, NY 14602

Telephone No.   585-555-5555

E-Mail maria.bell@novelconnect.com

Fax No. 585-555-5553

3. Eligibility Contact Point

☒ Mr. ☐ Mrs. ☐ Ms. ☐ Dr.

Name Dyle Tone

Address 414 Merlin Drive

Title VP, Quality/Safety

Rochester, NY 14602

Telephone No. 585-555-5552

Overnight Mailing Address (Do not use a P.O. Box number.)

Fax No. 585-555-5553

same

E-Mail dyle.tone@novelconnect.com

4. Alternate Eligibility Contact Point

☒ Mr. ☐ Mrs. ☐ Ms. ☐ Dr.

Name Chip Maker

Telephone No. 585-555-5556

Fax No. 585-555-5553

5. Applicant Status

a. Has the applicant officially or legally existed for at least one year, or prior to April 8, 2007? *(Check one.)*

☒ Yes   ☐ No

If you are unable to respond to any item,
please contact the Baldrige National Quality Program Office at (800) 898-4506 before submitting your form.

Malcolm Baldrige National Quality Award

5. Applicant Status—continued

b. Has your organization ever been a Malcolm Baldrige National Quality Award recipient? *(Check one.)*

☐ Yes ☒ No

If you checked "No," proceed to item 6.

c. If "Yes," was your organization an Award recipient in 2002 or earlier? *(Check one.)*

☐ Yes ☐ No

If you checked "No," your organization is not eligible to reapply this year for the Award or for feedback (please contact the Baldrige National Quality Program Office at [800] 898-4506 if you have any questions). If you checked "Yes," please choose one of the following options:

☐ Applying for feedback only ☐ Applying for the Malcolm Baldrige National Quality Award

6. Award Category and For-Profit/Nonprofit Designation *(Check as appropriate.)*

☒ Manufacturing (For-Profit Only) ☐ Nonprofit ☐ Health Care (For-Profit)

☐ Service (For-Profit Only) ☐ Education (For-Profit) ☐ Health Care (Nonprofit)

☐ Small Business (For-Profit Only) ☐ Education (Nonprofit)

Criteria booklet being used: *(Check one.)*

☒ *Criteria for Performance Excellence* (for use by businesses and nonprofit organizations)

☐ *Education Criteria for Performance Excellence*

☐ *Health Care Criteria for Performance Excellence*

Note: Education and health care organizations may choose to use the Criteria for Performance Excellence *and apply in the service, small business, or nonprofit categories. However, they probably will find their sector-specific Criteria* (Education Criteria for Performance Excellence *or* Health Care Criteria for Performance Excellence) *more appropriate.*

7. Industrial Classification

List up to three of the most descriptive three- or four-digit NAICS codes. *(See page 27.)*

334   517

8. Size and Location of Applicant

a. Total size of the workforce: ____4,188____ people

b. For the preceding fiscal year,
- check one financial descriptor: ☐ Sales ☒ Revenues ☐ Budgets
- check the range: ☐ 0–$1M ☐ $1M–$10M ☐ $10M–$100M ☐ $100M–$500M ☐ $500M–$1B ☒ More than $1B

c. Number of sites: U.S./Territories __12__ Outside U.S./Territories ____

**If you are unable to respond to any item,
please contact the Baldrige National Quality Program Office at (800) 898-4506 before submitting your form.**

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8. Size and Location of Applicant—continued

d. Percentage of employees: U.S./Territories __98__ Outside U.S./Territories __0.2__

e. Percentage of physical assets: U.S./Territories __100__ Outside U.S./Territories _____

f. Operational practices associated with all major organizational functions must be accessible for examination in the United States. If some activities are performed outside the applicant's organization (e.g., by a component of the applicant that is outside the United States or its territories, the parent organization, or its other subunits), will the applicant, if selected for a site visit, make available in the United States sufficient personnel, documentation, and facilities to allow full examination of its operational practices for all major functions of its worldwide operations?

⊠ Yes ☐ No ☐ Not Applicable

g. In the event the applicant receives an Award, can the applicant make available sufficient personnel and documentation to share its practices at The Quest for Excellence Conference and at its U.S. facilities?

⊠ Yes ☐ No

h. Attach a line-and-box organization chart for the applicant that includes the division or unit level. In each box, include the name of the unit or division and the name of its leader.

9. Subunits *(If the applicant is not a subunit as defined in the Eligibility Certification Overview on pages 8–9 of the Baldrige Award Application Forms, please proceed to item 10.)*

a. Is the applicant _____ a larger parent or system? *(Check all that apply.)*

☐ a subsidiary of   ☐ controlled by   ☐ administered by   ☐ owned by
☐ a division of   ☐ a unit of   ☐ a school of

b. Parent organization ("Parent" means the highest organizational level eligible to apply for the Award.)

Name _____   Highest-Ranking Official

Address _____   Name _____

_____   Title _____

Number of worldwide employees of the parent: _____ people

c. Is the applicant the only subunit of the parent organization intending to apply? *(Check one.)*

☐ Yes   ☐ No *(Briefly explain.)*   ☐ Do Not Know

d. Briefly describe the major functions provided to the applicant by the parent or by other subunits of the parent. Examples of such functions include, but are not limited to, strategic planning, business acquisition, research and development, data gathering and analysis, human resource services, legal services, finance or accounting, sales/marketing, supply chain management, global expansion, information and knowledge management, education/training programs, information systems and technology services, curriculum and instruction, and academic program coordination/development.

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9. Subunits—continued

e. Is the applicant self-sufficient enough to respond to all seven Baldrige Criteria Categories?

☐ Yes   ☐ No *(Briefly explain.)*

f. Provide the name and date of the official document (e.g., annual report, organization literature, press release) supporting the subunit designation. **Attach a copy of relevant portions** of the document showing a clear definition of the applicant as a discrete entity.

Note: Applicants supplying a Web site as documentation must print the relevant pages and include these in their Eligibility Certification Package.

Name of the Document _____   Date _____

g. Briefly describe the organizational structure and management links (relationship) to the parent.

Attach a line-and-box organization chart(s) showing the relationship of the applicant to the highest management level of the parent, including all intervening levels. Each box within the chart should include the name of the leader of the unit or division.

h. • Are 50 percent or more of the applicant's products or services sold or provided directly to customers/users outside the applicant's organization, its parent organization, and other organizations that own or have financial or organizational control of the applicant or parent? *(Check one.)*

☐ Yes   ☐ No

• Is the applicant's product or service unique within the parent organization? *(Check one.)*

☐ Yes   ☐ No

If "No," do other units within the parent provide the same products or services to a different customer base? *(Check one.)*

☐ Yes   ☐ No

If all of the boxes in "9h" are checked "No," complete 1, 2, and 3 below.

(1) Provide a brief description of how the market and product(s) or service(s) are similar.

(2) Indicate the organizational relationships of all units that provide similar or identical products or services, including the approximate sales, revenues, or budgets for each.

(3) Describe how the applicant is different from its parent and the other subunits of the organization (e.g., differences in market, location, or name).

If you are unable to respond to any item,
please contact the Baldrige National Quality Program Office at (800) 898-4506 before submitting your form.

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9. Subunits—continued

i. **Manufacturing and service subunits of parents with >500 employees only**

• Does the applicant have more than 500 employees? *(Check one.)*

☐ Yes   ☐ No

• Do the applicant's employees make up more than 25 percent of the worldwide employees of the parent? *(Check one.)*

☐ Yes   ☐ No

j. **Manufacturing and service subunits, regardless of parent size, that have fewer than 500 employees and less than 25 percent of all employees in the worldwide operations of the parent only (organizations other than manufacturing and service subunits should not complete this item)**

Note: If the answer to either of the following questions is "Yes," the applicant is eligible in the small business category.

• Was the applicant independent prior to being acquired, and does it continue to operate independently under its own identity? *(Check one.)*

☐ Yes   ☐ No

Note: If self-certification is based on the subunit being independent prior to being acquired and continuing to operate independently under its own identity, attach relevant portions of an official document to support this response.

• Is the applicant separately incorporated and distinct from other subunits of the parent? *(Check one.)*

☐ Yes   ☐ No

Note: If self-certification is based on the subunit being separately incorporated and distinct from other subunits of the parent, attach relevant portions of an official document (e.g., articles of incorporation) to support this response.

If all answers to "9i" and "9j" are "No," contact the Baldrige Office at (800) 898-4506 before submitting your form.

**If you are unable to respond to any item,
please contact the Baldrige National Quality Program Office at (800) 898-4506 before submitting your form.**

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10. Supplemental Sections *(Check one.)*

☒ The applicant has (a) a single performance system that supports all of its product and/or service lines and (b) products or services that are essentially similar in terms of customers/users, technology, workforce or employee types, and planning.

☐ The applicant has (a) multiple performance systems that support all of its product and/or service lines and/or (b) products or services that are not essentially similar in terms of customers/users, technology, workforce or employee types, and planning.

If you checked the second option, please describe briefly the differences among the multiple performance systems of your organization in terms of customers, workforce or employee types, technology, planning, and quality systems.

Note: The applicant's Eligibility Contact Point will be contacted if the second option is checked. Applicants may have two or more diverse product and/or service lines (i.e., in different NAICS codes) with customers, types of employees, technology, planning, and quality systems that are so different that the application report alone does not allow sufficient detail for a fair examination. Such applicants may submit one or more supplemental sections in addition to the application report. The use of supplemental sections must be approved during the eligibility certification process and is mandatory once approved.

11. Application Format

If your organization applies for the 2008 Award, in which format would you submit the Application Package? *(Check one.)*

☒ 25 paper copies (due date May 22, 2008)   ☐ CD (due date May 8, 2008)

12. Confidentiality Considerations

Baldrige Examiners are authorized to use cell phones, cordless phones, and VoIP to discuss your application.

☒ Yes   ☐ No

13. Self-Certification Statement, Signature of the Highest-Ranking Official

I state and attest that

(1) I have reviewed the information provided by my organization in this Eligibility Certification Package.

(2) to the best of my knowledge,

   • no untrue statement of a material fact is contained in this Eligibility Certification Package, and

   • no omission of a material fact has been made in this package.

(3) based on the information herein and the current eligibility requirements for the Malcolm Baldrige National Quality Award, my organization is eligible to apply.

(4) I understand that at any time during the 2008 Award Process cycle, if the information is found not to support eligibility, my organization will no longer receive consideration for the Award and will receive only a feedback report.

Maria Bell   3/3/08
_____   _____
Signature of Highest-Ranking Official   Date

Maria Bell
_____
Printed Name

If you are unable to respond to any item,
please contact the Baldrige National Quality Program Office at (800) 898-4506 before submitting your form.

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14. Eligibility Certification Filing Fee

Provide payment for the $150 nonrefundable fee to cover the cost of the eligibility filing process. Please indicate which method of payment will be provided:

☒ Check (enclosed) ☐ Money order (enclosed) ☐ ACH payment ☐ Wire transfer
☐ Visa ☐ MasterCard ☐ American Express

Check or money order
Please make your check or money order payable to the **Malcolm Baldrige National Quality Award.**

Send the check or money order as part of the Eligibility Certification Package to

> **Malcolm Baldrige National Quality Award**
> c/o ASQ
> 600 North Plankinton Avenue
> Milwaukee, WI 53203

ACH payment or wire transfer
Checking ABA routing number: 075-000-022
Checking account number: 182342002330

Please reference the Malcolm Baldrige National Quality Award with your payment. ASQ must be contacted either by phone at (414) 298-8789, ext. 7205, or e-mail at mbnqa@asq.org before an ACH payment or wire transfer is sent.

Visa, MasterCard, or American Express

Credit Card Number _____   Authorized Signature _____

Expiration Date _____   Printed Name _____

Billing Address for Credit Card _____   Today's Date _____

_____

W-9 Request
If you require an IRS W-9 Form (Request for Taxpayer Identification Number and Certification), please contact ASQ at (414) 298-8789, ext. 7205.

The 2008 Eligibility Certification Package must be sent on or before April 8, 2008, to be considered for the 2008 Award. The Eligibility Certification Package must include a proof of the mailing date. One option to fulfill this requirement is to send the package via a delivery service (e.g., Airborne Express, Federal Express, United Parcel Service, or the United States Postal Service [USPS] Express Mail) that automatically records the mailing date. If the package is mailed through the USPS (via a service other than Express Mail), applicants must include a dated receipt from the post office in the package.

**If you are unable to respond to any item,
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15. Nomination to the Board of Examiners

One senior member from each organization whose Eligibility Certification Package is **sent (with a proof of the mailing date) on or before March 7, 2008,** may become a member of the 2008 Board of Examiners. The opportunity to learn and the required commitment of time are substantial. The time commitment is a minimum of 114 hours from April to December (including approximately 40 hours in April/May to complete prework for the Examiner Preparation Course, 3–4 days in May to attend the preparation course, and another 50–70 hours from June through September to complete the Independent and Consensus Review). If requested by the Program, Examiners also are expected to participate in the Site Visit Review (approximately 9 days). Please note that all board appointments are for one year only and that travel and housing expenses incurred for the Examiner Preparation Course must be covered by the applicant. Also, if the applicant already has representatives on the Board of Examiners, nominating an additional person may impact the competitive selection of other applicant employees for another term.

Nominees must be citizens or permanent residents of the United States and be located in the United States or its territories.

☒ ___Dyle Tone_____ from our organization will serve on the 2008 Board of Examiners.

Name of Senior Member Nominee*

*Please, no substitutions after April 8, 2008.

Nominee's contact information:
☒ Mr. ☐ Mrs. ☐ Ms. ☐ Dr.

Nominee's Title VP, Quality/Safety

Name of Nominee's Organization   Novel Connect, Incorporated

Nominee's Work Address 414 Merlin Drive   Nominee's Home Address 1 Residential Drive

                         Rochester, NY 14602   Rochester, NY 14602

Note: Place an asterisk next to your preferred telephone number, fax number, and e-mail address.

Work Telephone No. 585-555-5552*   Home Telephone No. 585-555-1234

Work Fax No. 585-555-5553*   Home Fax No. --

Work E-Mail Address dyle.tone@novelconnect.com*   Home E-Mail Address --

**If you are unable to respond to any item,
please contact the Baldrige National Quality Program Office at (800) 898-4506 before submitting your form.**

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The following information is needed by the Baldrige National Quality Program to avoid conflicts of interest when assigning Examiners to evaluate your application and by Examiners in performing their evaluations.

16. Site Listing and Descriptors

Please refer to the instructions on page 13 of the *Baldrige Award Application Forms* to complete this Site Listing and Descriptors form. It is important that the totals for the number of employees, faculty, and/or staff; percentage of sales, revenues, or budgets; and number of sites on this form match the totals provided in response to 8a, 8b, and 8c on page 2 of the 2008 Eligibility Certification Form. For example, if you report a workforce of 600 people in response to question 8a, the total number of employees/faculty/staff provided in the Site Listing and Descriptors form should be 600 (see example below). For another example, see page ix of the *Share Food Case Study* (**www.baldrige.nist.gov/Share_Food.htm**). Duplicate the Site Listing and Descriptors page if all sites cannot be listed on a single page.

Provide all the information for each site, except where multiple sites produce similar products or services. In cases where many sites perform the same function, aggregate the sites under one listing and make a summary statement about the locations instead of listing an address for each one.

EXAMPLE			
Address of Site(s)	**Number** ☐ Employees ☒ Faculty ☒ Staff	**Percentage** ☐ Sales ☒ Revenues ☐ Budgets	**For each site, describe the relevant products, services, and/or technologies.**
Coyote Hall 85 Campus Way Albuquerque, NM 77351	381 Faculty 200 Staff	95%	Administrative headquarters, instructional and educational services
Cactus Hall 85 IT Parkway Bernalillo, NM 76052	17 Faculty 2 Staff	5%	Satellite campus for information technology instruction, including a technology lab

Address of Site(s)	**Number** ☒ Employees ☐ Faculty ☐ Staff *(Check one or more above, and list below the number and type of workforce members at each site.)*	**Percentage** ☐ Sales ☒ Revenues ☐ Budgets *(Check one above, and list below the % at each site.)*	**For each site, describe the relevant products, services, and/or technologies.**
414 Merlin Drive Rochester, NY 14602	1,622	54%	Headquarters of company operations, U.S. manufacturing, research and development, and distribution. Site includes offices, plant, research laboratory, and distribution center. Eight employees are co-located in Rochester and at the plants of the overseas suppliers/partners.

If you are unable to respond to any item,
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Address of Site(s)	Number ☒ Employees ☐ Faculty ☐ Staff *(Check one or more above, and list below the number and type of work-force members at each site.)*	Percentage ☐ Sales ☒ Revenues ☐ Budgets *(Check one above, and list below the % at each site.)*	For each site, describe the relevant products, services, and/or technologies.
22 Logistics Road Berkeley, CA 94702	311	8%	Pod site. Note: Novel Connect has 11 of these small, leased office spaces (located in midsized U.S. communities listed below) that serve as hubs for clusters of mostly home-based employees who compose the company's dispersed workforce.
4 Callway Drive Madison, WI 53703	554	16%	Call center hub, pod site
782 Lake Street Ann Arbor, MI 4810890	137	1.5%	Pod site
Pentagon Circle Way Arlington, VA 22204	362	5.5%	Pod site; mainly supports government customers and includes customer briefing center
203 Westernville Drive Austin, TX 78703	287	3.75%	Pod site; includes customer briefing center
3 Mountainview Pike Boulder, CO 80303	125	1.5%	Pod site
567 Indianhead Parkway Champaign, IL 61820	129	1.5%	Pod site
80 University Drive Chapel Hill, NC 27514	111	1.5%	Pod site
75 Hill Peak Road Hanover, NH 03755	152	1.75%	Pod site
11 Snowy Land Way Ithaca, NY 14850	284	3.5%	Pod site; includes technology center
7 College View Parkway West Lafayette, IN 47906	114	1.5%	Pod site

If you are unable to respond to any item,
please contact the Baldrige National Quality Program Office at (800) 898-4506 before submitting your form.

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17. Key Business/Organization Factors

List, briefly describe, or identify the following key business/organization factors. Be as specific as possible to help the Baldrige Program avoid real or perceived conflicts of interest when assigning Examiners to evaluate your application. "Key" means those organizations that constitute 5 percent or more of your competitors, customers/users, or suppliers/partners.

A.   Description of the applicant's main products and/or services and of the major markets served (local, regional, national, and international)

   Main products/services: Cell phone communication hardware and software, including accessories (i.e., clips, headsets, chargers, and carrying cases), as well as cell phones, communication devices, and ringtone software

   Major market served: U.S. consumer market

B.   List of key competitors

   Gee L (a large cell phone manufacturer); Nabruhtiek, Inc. (a manufacturer of integrated communication devices); Treeano LLC (a large cell phone manufacturer); Leeaapp Corporation (a niche cell phone manufacturer); Monkeyfans Corporation (a large cell phone manufacturer); Bumplum Corporation (a manufacturer of integrated communication devices); CueNeb, Inc. (a niche cell phone manufacturer); Rockeins Company (a large cell phone manufacturer); Strawberrygrape LLC (a manufacturer of integrated communication devices); and Toomalo, Inc. (a large cell phone manufacturer)

C.   List of key customers/users

   U.S. Department of Homeland Security, as well as individual consumers

D.   List of key suppliers/partners

   Innovular; retailers (Goodbuy Electronics and Switch Town); other smaller carrier outlets; a limited number of small, company-branded retail outlets and kiosks in shopping malls; a security company (Sells Cargo); a law firm (Bench, Wrench & Associates); an IT-support company (Hubs-R-Us); many logistics companies and component manufacturers; local workforce boards (part of the state Department of Labor) and subject-matter experts from niche markets; two offshore contract manufacturers (Huangh Manufacture, Huangh District, Shenyang, China 11003, and Delphi Manufacture, Sector 2, Chandigarh 160 022, India); 16 universities in pod cities; and transportation companies.

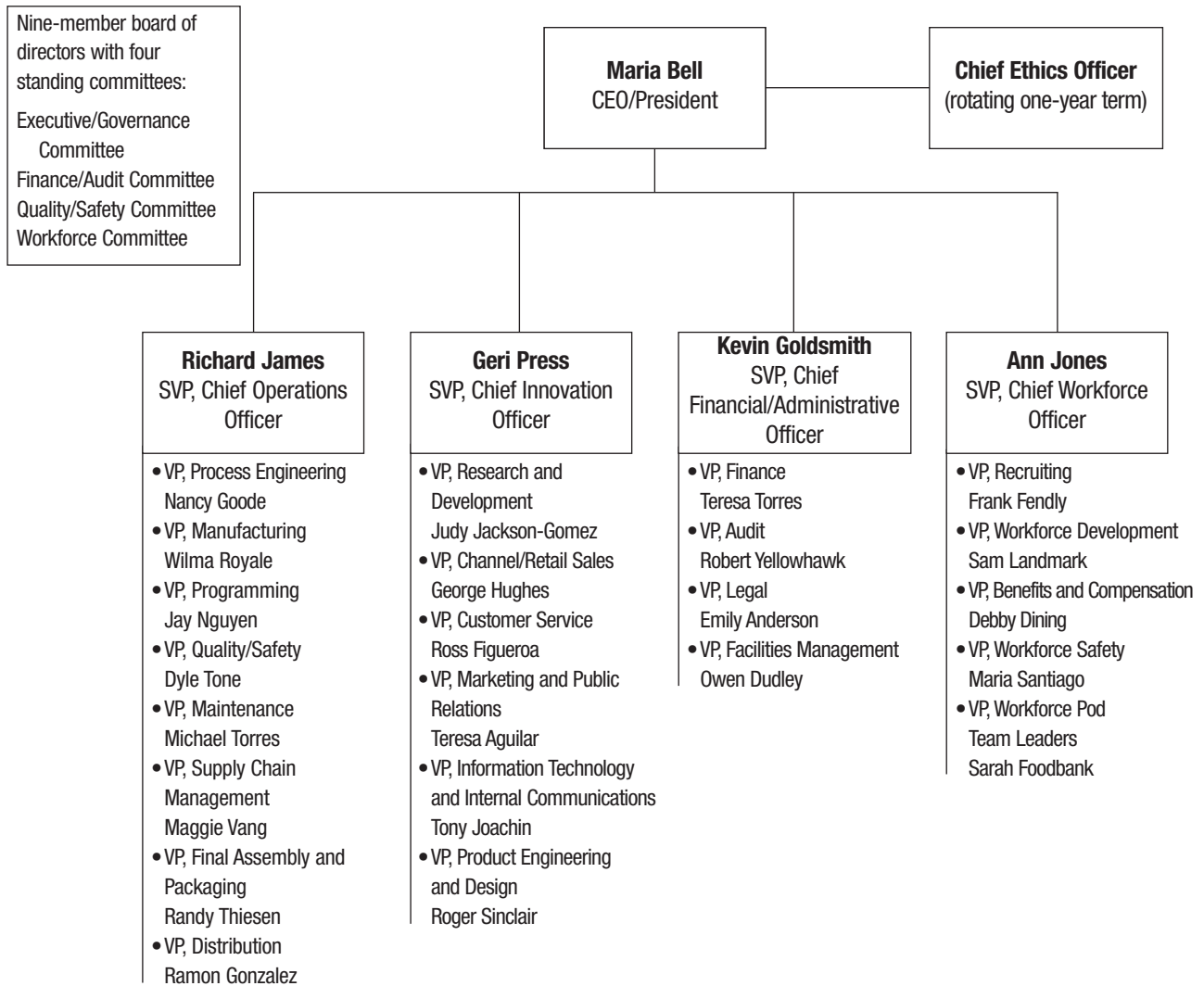E.   The name of the organization's financial auditor

   Cooperhouse Marwick

F.   The applicant's fiscal year (e.g., October 1–September 30)

   January 1–December 31

**If you are unable to respond to any item,
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Novel Connect Organization Chart

Nine-member board of directors with four standing committees:

Executive/Governance
   Committee
Finance/Audit Committee
Quality/Safety Committee
Workforce Committee

Maria Bell
CEO/President

Chief Ethics Officer
(rotating one-year term)

Richard James
SVP, Chief Operations Officer

- VP, Process Engineering
  Nancy Goode
- VP, Manufacturing
  Wilma Royale
- VP, Programming
  Jay Nguyen
- VP, Quality/Safety
  Dyle Tone
- VP, Maintenance
  Michael Torres
- VP, Supply Chain
  Management
  Maggie Vang
- VP, Final Assembly and
  Packaging
  Randy Thiesen
- VP, Distribution
  Ramon Gonzalez

Geri Press
SVP, Chief Innovation Officer

- VP, Research and
  Development
  Judy Jackson-Gomez
- VP, Channel/Retail Sales
  George Hughes
- VP, Customer Service
  Ross Figueroa
- VP, Marketing and Public
  Relations
  Teresa Aguilar
- VP, Information Technology
  and Internal Communications
  Tony Joachin
- VP, Product Engineering
  and Design
  Roger Sinclair

Kevin Goldsmith
SVP, Chief Financial/Administrative Officer

- VP, Finance
  Teresa Torres
- VP, Audit
  Robert Yellowhawk
- VP, Legal
  Emily Anderson
- VP, Facilities Management
  Owen Dudley

Ann Jones
SVP, Chief Workforce Officer

- VP, Recruiting
  Frank Fendly
- VP, Workforce Development
  Sam Landmark
- VP, Benefits and Compensation
  Debby Dining
- VP, Workforce Safety
  Maria Santiago
- VP, Workforce Pod
  Team Leaders
  Sarah Foodbank

Glossary of Terms and Abbreviations

A

APICS
American Production and Inventory Control Society

B

BB
Brian Burns

BOD
Board of Directors

C

CAD
computer-aided design

CAG
Customer Advisory Group

CCHP
Customer Complaint Handling Process

CEO
Chief Executive Officer

CF/AO
Chief Financial/Administrative Officer

CIO
Chief Innovation Officer

COO
Chief Operations Officer

CWO
Chief Workforce Officer

cycle counting
ensures that capital is not unnecessarily tied up in inventory that sits, awaiting use

D

DART
days away/restricted time rate (measure of safety)

distributed workforce
workforce assigned to pods throughout the United States (see "pods"; see also "virtual workforce")

DMAI (C)
Design, Measure, Analyze, Improve (Control) Process

E

EBIT
earnings before interest and tax

eCAD tools
electronic computer-aided design tools

EPA
Environmental Protection Agency

EPP
Emergency Preparedness Process

ESL
English as a second language

F

FCC
Federal Communications Commission

FTE
full-time equivalent

G

GB
Geri Burns

GBQ
Get-Better-Quick (plan)

GPS
Global Positioning System

GSM
Global System for Mobile communications

H

HD
high definition

HDI
Help Desk Institute

HRU
Hubs-R-Us, Inc.

I

IP
Internet protocol

IPC-A-610
electronics assembly standard, recommended as a reference for use when evaluating or establishing design and process requirements

IPO
initial public offering

ISO 14001
International Organization for Standardization's environmental management standard

IT
information technology

IT/IC
Information Technology and Internal Communications Team

K
kb/s
kilobit per second

L
Lean
a set of process management principles used by organizations to focus on the reduction of waste to improve overall customer value

M
MAP
Measuring Action and Performance database

mCAD tools
mechanical computer-aided design tools

MSDSs
materials safety data sheets

O
OEM
original equipment manufacturer

OSHA
Occupational Safety and Health Administration

OTD
on-time delivery

P
PBT
profit before tax

PCs
personal computers

PDA
personal digital assistant

PE
profit to earnings ratio

PFPD
Product, Feature, and Process Development (Process)

PIP
Process Improvement Process

PLC
process logic controller (manufacturing equipment controller)

PM
preventive maintenance

PMap
personal measuring of action and performance (personal development plan for all employees)

pods
small office spaces that serve as hubs for clusters of employees performing various jobs. Concentrated in midsized communities, the pod cities have been chosen based on their access to universities (for a high-skilled workforce) and components' manufacturers, as well as these communities' representation of and proximity to Novel Connect's niche customer groups/markets.

Q
QC
quality control

QFD
quality function deployment

QuEST Forum
a forum for cooperation and communication among telecommunication service providers and suppliers

R
R&D
research and development

RAM
random access memory

RAT
Risk Assessment Team

S
SEC
Securities and Exchange Commission

Six Sigma
a set of practices to systematically improve processes by reducing variation and eliminating defects

SLT
Senior Leader Team

Sol Games
Summer and Winter Solstice Games

SOX
Sarbanes-Oxley Act

SPC
statistical process control

SPP
Strategic Planning Process

SVP
Senior Vice President

T

TL 9000
the standard defining the quality management system developed for the telecommunications industry

Triple-Ms
Mobile Monthly Meetings: virtual organizational review meetings

Trot Engage 14
employee satisfaction survey

TRR
total recordable rate: the number of workplace injuries and illnesses per 100 full-time employees resulting in those employees' days away from work, job transfers or restrictions, medical treatment, or other OSHA-recordable information

V

virtual workforce
electronically linked, dispersed workforce (see also "distributed workforce")

VOC
voice of the customer

vocoder
a speech analyzer and synthesizer

W

WE
waste event

WTB
Wireless Telecommunications Bureau

Preface: Organizational Profile

P.1 Organizational Description

Novel Connect, Incorporated (Novel Connect) was founded in 1994 by Maria Bell. With a master's degree in engineering from the Red Socks Institute of Technology and 15 years of experience in high-tech industries, Maria wanted to start a company that would create true value for its customers, employees, and partners. She decided to start a company that would allow her to build on her technology experience and afford her some freedom. Novel Connect is that company—a company that is novel in the way it manages employees, novel in the way that it focuses on customer niche needs, and novel in the way that it has built relationships with suppliers and partners—a company that focuses only on its true areas of expertise.

In 1994, Novel Connect began to manufacture cell phone accessories such as clips, headsets, chargers, and carrying cases. The company grew rapidly in the mid-'90s, partly because the cell phone industry was experiencing very high growth and partly because Novel Connect's focus was on emerging customer needs. Novel Connect believed that digital cell technology would revolutionize mobile communications and that an opportunity to offer complementary products would satisfy the unique needs of different market niches. The company's focus on innovation would form a culture that has endured for nearly 15 years.

By the end of its second year in business, Novel Connect had about 50 employees based out of a small, one-shift manufacturing facility near Maria's home in Ithaca, New York. However, all nonproduction employees (more than half of the 50) worked out of their homes, reflecting Maria's personal desire to allow flexible work schedules, promote work/home life balance, and eliminate regimented employee commutes. (Maria also hoped to sustain an environmentally friendly company.) Maria believed that she could build and grow a cutting-edge manufacturing company with a predominately virtual workforce, something unusual in the manufacturing sector but more in line with what she believed would satisfy the needs of a large percentage of the workforce.

In 2000, Novel Connect acquired Sybil Cellcom, Inc., a small manufacturer of cell phones. This acquisition drove Novel Connect directly into the cell phone industry, brought it new intellectual property (such as the emerging Redmolar technology for hands-free cell phone communications), and instantly propelled Novel Connect into innovative product design. Novel Connect consolidated its operations in Rochester, New York (Sybil's former headquarters) and began focusing heavily on its strengthening core competency: innovative niche product/feature design for cell phones.

During a planning cycle in 2000, Novel Connect made the strategic decision to move its basic manufacturing (components and hardware) offshore and to focus on identifying, designing, and producing proprietary products and features—those that would provide a higher profit margin and would satisfy

specialized and rapidly changing market needs. Novel Connect also made the decision to hire staff nationwide to facilitate sales and channel distribution, be closer to communities that reflected its niche products, and maintain its unique philosophy of a virtual workforce.

In late 2000, Novel Connect also developed software to enable downloading of special ringtones from the Internet and directly from cell carriers. The decision to get into ringtones rounded out Novel Connect's comprehensive portfolio of products: hardware and software for cell phones.

After suffering a small decline in sales in late 2001 and 2002, primarily due to the U.S. economic recession and 9/11 tragedy, Novel Connect decided to go public to raise capital for expansion. Novel Connect had an initial public offering (IPO) in late 2002 and celebrated its fifth anniversary as a public company last fall.

P.1a(1) Novel Connect is currently considered a midsized cell phone and cell phone accessory manufacturer, with $3.25 billion in sales and approximately 26.6 million phones sold in 2007. Novel Connect produces standard cell phones but also designs and manufactures other communication devices that integrate audio, video, text, a Global Positioning System (GPS), and other features. In the last few years, Novel Connect has perfected a niche focus, concentrating on understanding the particular requirements of specific market niches and then designing and/or customizing phone features to satisfy those specialized needs. As such, Novel Connect has developed several lines of devices that cater to specific needs:

- *Novel Complete*™: Novel Connect's core device—a cell phone that integrates several contemporary functions and features (such as high-definition [HD] graphics, TV, a camera, music, Internet browsing, and online shopping), as well as more advanced features (such as video messaging, videoconferencing, GPS navigation, and basic office software). This line includes the *Phashion*™ phones.
- *Novel Secure 1*™: A line of phones that focus on personal and home security, with features such as a one-touch 911 button, a panic button, a GPS locator, online home monitoring, and direct alerts to home security partners.
- *Novel Free*™: A line of audio-centric phones that utilize Redmolar, voice-response dialing capability, audio e-mail, and other features.
- *Novel Bug*™: Just launched, this product is a cell phone the size of a large hearing aid that is fully wireless and hands-free, which promotes increased safety for driving and maximum mobility.
- *NovelAid*™: A line of phones targeted to disabled consumers, with features for both the visually impaired (with Braille push buttons) and the hearing-impaired (with audio-to-text conversion).

Many of Novel Connect's phones can be customized to suit a particular market segment or meet the needs of different customers. For example, many of the features in *Novel Complete* can be added to one of the other more specialized

phone lines, and some features of *Novel Free* can be integrated into *Novel Bug*, creating a device for maximum mobility, safety, and hands-free communication.

See P.1b(3-4) for the delivery mechanisms used to provide Novel Connect's products and services to customers.

P.1a(2) Novel Connect has a unique organizational culture, centered on its core competencies of communication and agility. Some aspects of this culture can be found in how Novel Connect operates:

- The company uses mainly cell phones to conduct business, with limited use of landlines.
- Most employees (except for those in direct production and a few roles at headquarters) work primarily out of their homes.
- Clusters of employees are concentrated in "pods" around the United States, allowing most of Novel Connect's workforce to be closer to its niche customer segments, as well as to research universities and other partners. See P.1a(4) for more information on pods.
- Most nonproduction employees have no fixed work hours and no assigned office space (office space in pods can be reserved), and most employees use flexible work schedules.
- Minimal air travel is required, and virtual meetings that utilize video, Web, and cell teleconferencing are emphasized.

Novel Connect's culture is embedded in its purpose, mission, vision, and core values, as listed in Figure P.1-1.

P.1a(3) Novel Connect has approximately 4,200 full-time equivalent (FTE) employees, with 1,200 in innovation (sales, R&D, marketing, information technology [IT], and product engineering), 2,738 in operations (process engineering, manufacturing, programming, and assembly), and 250 in administration and other support services (see organization chart). Novel Connect's manufacturing facility in Rochester operates a core manufacturing shift and a small second manufacturing shift.

Since Novel Connect manages its workforce as a matrixed organization, headquarters staff in Rochester (i.e., most members of the Senior Leadership Team [SLT] and their direct reports) have functional expertise as well as overall responsibility for the workforce. Pod leaders are not direct supervisors but rather are responsible for coordinating communication and coaching employees in their work units (i.e., pods). Other leaders in the organization include team leaders of standing or ad hoc cross-functional teams, which often draw members from many geographic locations (e.g., two or more of the 11 pods); these leaders may be SLT members or their direct reports, or they may be pod leaders or home-based pod workers. With matrix management in place, employees dispersed throughout the pod cities report to one supervisor or functional manager, usually based in Rochester, and they work with one or more team leaders.

Novel Connect has a 24/7 nearly virtual customer support call center based in Madison, Wisconsin. The call center

Figure P.1-1 Purpose, Mission, Vision, and Core Values

Purpose	Novel Connect facilitates a world on the move.
Mission	Novel Connect leverages new and existing technology to advance mobile communication.
Vision	Novel Connect is the most innovative company for mobile communication in the world.
Core Values	*Agility*: We focus on speed in all aspects of our company; this includes our responses to market needs, our supply chain, and our decision making.

Valuing Employees/Partners: We believe in achieving work/home life balance and in maximizing employee contributions and engagement; we believe in treating everyone in our diverse community with respect and dignity; and we believe that our success will be greater with strong partners.

Innovation: We believe that sustained success is based on our ability to respond to customer needs with new products, features, and services.

Sustainability: We strive to sustain this world on the move. Therefore, our products are designed for the environment by maximizing the use of recycled and eco-friendly materials and components and by minimizing hazardous materials and waste; we also strive to reduce environmental waste and energy consumption through our virtual workforce (e.g., reduced commutes conserve vehicle fuel and cut down on emissions).

spontaneously routes inbound calls to remote agents working from home all over the country. Calls come primarily from end-use consumers, allowing Novel Connect to provide a "help desk" for product issues. This service provides a level of support (and a listening post) unparalleled in the industry.

There is no employee union at Novel Connect. Sixty-five percent of Novel Connect's employees are women. Novel Connect has a relatively young workforce, with about half of its employees under age 40. This is because Novel Connect's workforce pods are located primarily in "college towns," which serve as a natural recruiting base for recent graduates in engineering and marketing and also represent a concentrated population of a large segment of Novel Connect's customer base. Twenty percent of Novel Connect's workforce considers English to be a second language. About 15 percent of its employees have disabilities; since many of these disabilities are physical, the virtual and distributed workforce makes Novel Connect an attractive employer to such workers. This workforce group is attuned to the needs of a growing segment of Novel Connect's customer base and line of phones.

Novel Connect's workforce is highly educated: 25 percent have a postgraduate degree (many in engineering, operations, business,

marketing, and related fields), 40 percent have an undergraduate degree, 25 percent have at least some technical college, and 99 percent have a high school diploma.

P.1a(4) The main Rochester site, with about 1,600 of Novel Connect's approximately 4,200 employees, contains Novel Connect's only company-owned manufacturing plant, as well as the headquarters for many administrative and other support services. See Figure P.1-2 for key workforce requirements.

Figure P.1-2 Workforce Requirements and Expectations

> **General Requirements and Expectations**
> - Knowing what's expected and having the right materials and training to do the jobs
> - Timely and appropriate feedback and recognition
> - Opportunities for growth and development
> - Organizational flexibility to accommodate diverse lifestyles
> - Co-workers who are committed to excellence
> - Connection with the company's values and an ability to contribute to its success
>
> **Additional Health and Safety Requirements**
> **Office (and Home) Workers**
> - Appropriate work space ergonomics
> - Personal safety and security
>
> **Manufacturing Workers**
> - Appropriate ergonomics
> - Machine operation safety
> - Environmental safety
> - Emergency preparedness
> - Personal safety and security

Novel Connect has elected to outsource basic manufacturing to offshore partners in China and India, focusing only on more complicated production, on technologies it considers its core competencies, and on sensitive intellectual property. As such, Novel Connect has retained much of the front-end of its "value creation" processes (such as consumer data and market analysis, carrier and supplier relationships, and product and feature development; see Figure 6.1-4, Product, Feature, and Process Development Process) and much of the back-end of its "value creation" processes (such as final packaging and point-of-purchase sales). Because the in-house production in Rochester focuses on newer products with features that are intended for an "early-adopter" market, Novel Connect needs to consistently improve its performance results in those critical assembly (Figure 7.5-10) and packaging (Figure 7.5-11) processes. Novel Connect's production line uses a significant amount of automation, which allows its workforce to focus primarily on higher-skilled roles and also contributes to Novel Connect's higher margin.

Novel Connect's workforce is largely decentralized, with about 62 percent working outside of Rochester. Most of these virtual workers are assigned to "pods," which are clusters of employees

performing various jobs concentrated in midsized communities. The pod communities have been chosen based on their access to universities (for a high-skilled workforce), components' manufacturers, and transportation, as well as these communities' representation of and proximity to Novel Connect's niche customer groups/markets. Novel Connect's pod cities are listed in the Eligibility Certification Form.

Each pod has a small facility that operates as a gathering place for home-based employees, partners, and customers to congregate, meet face-to-face, conduct focus groups or product reviews, and feel a sense of physical community. An employee might be located in a pod and have assigned office space there, might be considered a flex worker who can work from home or reserve office space at a specific pod, or might be considered an employee who works from home all the time but could reserve office space at any pod around the country when on travel. Although Novel Connect strives to be as virtual a company as possible, the small amount of physical office space for each pod is leased so the company can shrink or expand without a huge cost impact, and the pods allow for additional recruitment and retention of employees in remote, lower-cost areas around the country who can work entirely from home. More office space is set aside for the pod in Berkeley, California, which serves as the distribution/logistics site for shipping to and from offshore partners; for the pod in Madison, Wisconsin, which serves as the hub to operate a call center; for the pod in Arlington, Virginia, where staff mainly support Novel Connect's government customers and which includes a customer briefing center; and for the pod in Austin, Texas, which includes a customer briefing center. Pods also have the following characteristics:

- clusters of couches and tabletops grouped into common areas (a student-union-like central gathering place to facilitate dialogue), conference rooms, technology-equipped office space, and enclosed project innovation rooms designated for engineering/design work
- technology: data ports to plug in laptops and videoconference equipment
- lockers in which employees can store their personal belongings

P.1a(5) Novel Connect's mandatory and voluntary regulatory agencies are represented in Figure 1.2-2.

P.1b(1) Since late 2002, Novel Connect has been a publicly traded company. It has a nine-member Board of Directors (BOD) elected for four-year staggered terms (renewable once) by Novel Connect shareholders. Eight of the nine director seats are independent, with Novel Connect's bylaws allowing only one staff member (the Chief Executive Officer [CEO]) to serve on the BOD. The primary role of the BOD is to advise senior leaders on strategic direction, to provide financial oversight, to set and approve governance policy, and to hire and evaluate the CEO. The BOD has four standing committees: the Executive/Governance Committee, the Finance/Audit Committee, the Quality/Safety Committee, and the Workforce Committee.

Novel Connect has a relatively flat organization structure, operating with a five-person SLT composed of the

CEO/President, Chief Operations Officer, Chief Innovation Officer, Chief Financial/Administrative Officer, and Chief Workforce Officer. In addition, an executive serves as the Chief Ethics Officer, a rotating one-year commitment. Each of the 11 major workforce pods has a team leader, who provides support for the workforce in the field. Otherwise, reporting relationships for field employees are through the functional/process role.

P.1b(2) Novel Connect currently sells only to the U.S. market, though it is currently considering expanding to international markets. In the United States, Novel Connect groups its market into three main segments: personal consumers (those who use cell phones primarily for personal use), business consumers (those who use cell phones for business/commercial use), and government consumers. Within each segment, Novel Connect targets specific subsegments (see their key requirements and expectations for products and services, as well as the differences in requirements and expectations, in Figure 3.1-1).

Novel Connect has developed a distinctive way of forming relationships and getting close to leading-edge customers to identify emerging trends in features/design. Unlike most industry organizations, Novel Connect views market research and marketing as core processes, and it places a strong emphasis on repeat purchases as a way to build relationships and maintain market share.

P.1b(3-4) Novel Connect has several key partners and suppliers that play a role in its work systems and the production and delivery of products and services, as well as its innovation processes.

- **Offshore manufacturing suppliers:** These suppliers provide basic cell phone and accessory components such as chips, displays, cameras, keypads, vocoders, antennas, digital signal processors, and other parts. One is located in Shenyang, China, and the other in Chandigarh, India.
- **Cell carrier:** Novel Connect currently has an exclusive arrangement with Innovular, an international wireless network provider. Innovular is critical for coverage; for reducing dropped calls; and, to an extent, for contributing to feature design.
- **Retailers:** Current distribution channels include (1) existing electronic/communication "big box" retailers (such as Goodbuy Electronics and Switch Town); (2) carrier retail outlets; (3) a limited number of small, company-branded retail outlets and kiosks in shopping malls; and (4) direct Internet sales.
- **Transportation companies:** These companies provide distribution, warehousing, and shipping—both inbound from offshore manufacturing and for final product distribution.
- **Integrated component/software manufacturers:** These manufacturers make productivity, GPS, and video and teleconferencing software.
- **Universities:** Novel Connect has relationships with 16 universities in the 11 pod communities. These universities provide students who conduct research, serve as employees, and are a key market segment.
- **IT Support:** Companies such as Hubs-R-Us, Inc. (HRU), provide and support integrated software and hardware for productivity, video- and teleconferencing, servers, and system backups (for Novel Connect's operations, not for its devices).
- **Security company:** Novel Connect has an exclusive agreement with Sells Cargo to provide integrated security through its devices.
- **Law firm:** Novel Connect relies on Bench, Wrench & Associates, a firm specializing in intellectual property, government and homeland security issues, and workforce/ employee law; offices are in Washington, D.C., New York, and San Francisco—close to three of Novel Connect's main facilities/pods.

P.2 Organizational Challenges

P.2a(1) Novel Connect's primary competitors are the five largest cell phone manufacturers (Treeano LLC; Toomalo, Inc.; Monkeyfans Corporation; Gee L; and Rockeins Company), along with other niche players (Leeaapp Corporation and CueNeb, Inc.). Novel Connect also competes with several manufacturers of integrated communication devices (companies such as Strawberrygrape LLC; Nabruhtiek, Inc.; and Bumplum Corporation), along with several dozen competitors in the fragmented cell phone component and ringtone markets.

Novel Connect is currently the seventh-largest manufacturer of U.S. cell phones (see Figure 7.3-1), with about $3.25 billion of the U.S. market share in 2007. Novel Connect is ranked fourth in ringtone sales ($200 million in 2007).

P.2a(2) A few principal factors determine success in the industry:

- Having a strong relationship with carriers
- Being able to respond to rapid changes in the marketplace with new product designs or features and/or superior hardware/software quality
- Maintaining strong margins by controlling costs and/or optimizing process performance
- Managing the supply chain

More and more, cell phone manufacturers are compelled to collaborate with other companies (such as suppliers of critical components like antennas). Novel Connect has opted to collaborate with a variety of partners/suppliers (such as offshore manufacturers, its carrier Innovular, universities, and suppliers) not out of necessity but out of a desire to lead with innovation and quick responses to market changes.

P.2a(3) Novel Connect currently makes extensive use of benchmarking data from several organizations. These include the QuEST Forum (for telecommunications data), the Association for Connecting Electronics Industries (for IPC-A-610, a quality-of-work standard), PH and Smell (for data on electronic waste), the American Production and Inventory Control Society (APICS; for best-practice ratios), Best-of-the-Rest Freight Carriers (for data on transportation), Bloodred Orange (for system uptime benchmarks), and Rushed (for carrier uptime benchmarks), among other organizations. For customer-related information, Novel Connect uses the Allegiance Survey, the Help Desk Institute (HDI), and SooperdooperSoft.

P.2b Novel Connect's key business, operational, and human resource strategic challenges are identified as part of strategic planning and have shifted considerably in the rapidly changing cell phone industry. Today, Novel Connect considers the following to be its key challenges:

- **Availability of a highly skilled workforce:** This is a particular challenge in the highly specialized fields of communications technology, engineering, and marketing and also impacts Novel Connect due to its pod locations in communities with small labor pools (although the proximity of Novel Connect's pods to universities and the ability of remote employees to work virtually help to overcome this challenge). Given the size and market share of its competitors, Novel Connect cannot compete by offering high salaries alone. See 2.1b for more information on this strategic challenge.
- **Communication:** This is a challenge given Novel Connect's decentralized environment; in addition, Novel Connect's ability to maintain its unique, predominately virtual culture as it continues to grow and change is a challenge.
- **Logistics:** This challenge includes transportation and supply chain management.
- **Volatility in niche markets:** Rapidly changing customer/market needs present an opportunity as well as a challenge; Novel Connect's ability to sustain its core competency of innovation is predicated on the company's ability to rapidly learn of emerging needs and respond by using cutting-edge/emerging technology.
- **Protection of intellectual property:** This challenge arises from Novel Connect's dispersed workforce and overseas partnerships.
- **Volatility of Overseas Environment:** Novel Connect's reliance on offshore manufacturing relationships—while helping its profit margin and keeping the company focused on its strengths—introduces risks (e.g., world events could create volatility, currency markets fluctuate, political changes could cause strife).
- **Market forces driving the cost of cell phones and market penetration:** See 2.1b for more information on these strategic challenges.

Novel Connect has several strategic advantages that allow it to effectively counteract challenges and compete in a difficult industry.

- **Product/feature design innovation:** Novel Connect is considered one of the market leaders in cell phone design, having the ability to rapidly respond to changing market niche requirements.
- **Business model innovation:** A distributed, virtual workforce promotes employee engagement and rapid response and, by reducing physical assets, helps maintain a healthy profit margin.
- **Supplier partnerships/lowered costs:** Novel Connect has strong relationships with offshore manufacturers to supply necessary basic components, allowing Novel Connect to focus on its innovative niche product/feature design, a core competency (see Figure 6.1-1).

P.2c Novel Connect uses a systematic performance improvement process for innovation, evaluation, and learning (see Figure 6.2-1, Process Improvement Process). The process, using Design, Measure, Analyze, Improve (DMAI) as a base, solicits ideas from the workforce, allows employees to build out and test those ideas in pilot scenarios, and then rolls out ideas worthy of implementation. The process makes innovation systematic at Novel Connect and encourages contributions from employees (as well as from its partners, customers, suppliers, and other stakeholders).

In the past year, Novel Connect has started using Lean/Six Sigma to help further improve the performance of its key processes. In 2008, pod leaders will be trained in these concepts, and Novel Connect will deploy Lean/Six Sigma to partners in 2009.

Finally, Novel Connect uses a balanced scorecard, Novel Compass, for measuring organizational performance and monitoring progress on strategy. Novel Connect uses the MAP (Measuring Action and Performance) databases for tracking and sharing information on daily operations and performance improvements. Novel Connect uses many voice-of-the-customer (VOC) methods (see Category 3) to translate customer requirements into product design features.

1: Leadership

1.1 Senior Leadership

1.1a(1) In 1994, the SLT established Novel Connect's original vision and values during several brainstorming and planning sessions. The vision and values were reviewed and refined several times: in mid-1996; in 2000, after the acquisition of Sybil Cellcom; and again in 2002, before the company's IPO. During these revisions, a draft was issued by the SLT, and input and confirmation were sought from key customers and partners, as well as from all employees. Since 2003, the mission, vision, and values have been annually reviewed at the start of each Strategic Planning Process (SPP) cycle (see 2.1a). Through these structured reviews and revisions, Novel Connect has improved the vision and values and developed "The Novel Path" (Figure 1.1-1)—a graphical depiction of Novel Connect's leadership system, performance management process, and organizational reviews.

The Novel Path is deployed to the workforce as part of the performance appraisal process, which is based on a combination of individual results and company performance. The Novel Path is reinforced with employees on an ongoing basis through all written communications and through the requirement that one core value be highlighted and discussed at the beginning of every meeting, including weekly meetings of supervisors with staff. In discussions of each core value, examples are sought of how it has

been demonstrated, and opportunities are identified to demonstrate it during upcoming events.

The Novel Path is deployed to key suppliers and partners. Partners must demonstrate the values as part of Novel Connect's partner selection process; in addition, partners participate in the SPP, where the Novel Path is reviewed and validated. Some research-based questions in Novel Connect's customer surveys (e.g., Allegiance, see 3.1a[2]) allow the Novel Path to be deployed to customers; the Novel Path also is included in some fashion in most marketing material. The Novel Path is deployed to community stakeholders through funding events that demonstrate a specific link to a Novel Connect core value (see 1.2c).

In addition to senior leaders' participation in community activities linked to Novel Connect's core values, senior leaders demonstrate commitment to the values through the requirement that they document at least one project they personally lead that exemplifies each core value each year. Senior leaders also must lead weekly discussions that explore one core value.

1.1a(2) Senior leaders promote an ethical environment by establishing policies that require legal and ethical behavior, requiring a signed Code of Ethical Compliance from all employees annually, and establishing the Chief Ethics Officer role to investigate and resolve ethical concerns. The SLT also is personally involved in developing and discussing Ethics Examples, which are ethical scenarios that are shared with all

Figure 1.1-1 The Novel Path

Figure 1.1-2 Activities Promoting Sustainability

• Integrating the Novel Path into leadership and workforce practices, all decisions, and relations with all stakeholders
• Expecting and requiring all employees to exhibit "leadership," whether they are formal or informal leaders
• Establishing and requiring systematic processes for the dispersed workforce of this company
• Establishing a rigorous succession planning process for all leadership positions as well as key individual contributors
• Maintaining a distributed workforce (i.e., geographically dispersed and clustered in pods near markets and/or education partners) to encourage innovation/protect against disasters
• Maintaining ISO 14001 registration

employees and key suppliers/partners during monthly meetings. These scenarios are developed by the SLT based on actual and plausible cases; they are typically not clear black-and-white situations but rather reveal the shades of gray that are often present in ethical dilemmas. Employees are encouraged to send feedback about the scenarios in real time or as follow-up questions to the discussion. Written scenarios are followed up with monthly ethics videos showing one or more senior leaders discussing the scenario, possible responses, and the response that most closely aligns with the Novel Path. In this way, the workforce and other key stakeholders see company leaders dealing with specific ethical issues in a way that aligns with Novel Connect's core values. Legal and ethical issues are immediately addressed through the process discussed below (see 1.2b[2]); such issues also are incorporated into anonymous scenarios that are discussed monthly.

1.1a(3) Novel Connect's SLT has created a sustainable organization through several activities, listed in Figure 1.1-2. How senior leaders set the organizational environment is described in Figure 1.1-3.

Senior leaders create an environment for organizational improvement by using Novel Connect's systematic Process Improvement Process (PIP) and DMAI Process (detailed in 6.2a[1]), which emphasize cycle time and new ways of doing work, in addition to traditional process improvement. In addition, Novel Connect recently introduced Lean/Six Sigma, first in manufacturing and next in the administrative processes and pods. In using these processes, Novel Connect's leaders foster innovation that adds desirable product design features and provide for faster, more efficient processes.

The SLT creates an environment for the accomplishment of Novel Connect's mission and strategic objectives through the Mobile Monthly Meetings ("Triple-M" meetings) that include weekly operational reviews and monthly reviews of progress toward objectives. Objectives and action plans cascade down within the workforce and to suppliers and partners (see 2.2a).

Innovation, a core value, is strongly encouraged and highly prized by Novel Connect's senior leaders. While patents filed by employees belong to the company, Novel Connect rewards successful patents with bonuses worth up to one year's salary. Since 1997, 113 employees have received more than $10 million

for recognition of patents. Novel Connect's annual Pathways Innovation Award Process also recognizes individuals and teams whose ideas have the most potential to have a favorable impact on customers and markets. Senior leaders select recipients based on rigorous criteria that tie to Novel Connect's objectives and values, and SLT members personally participate in the presentations of the awards. In addition, Novel Connect employees are expected to spend 10 percent of their time generating new ideas, products, and services or assisting team members in bringing their ideas forward. This 10 percent expectation may not occur in consistent increments of time throughout the workday or workweek but rather is an annual average (see Figure 7.5-18).

The Novel Connect Innovation Process was developed and adapted from those of several other organizations, such as 4N, Nottingham Sparks, and other companies known for their innovation. The Novel Connect Innovation Process starts with a round of divergent ideas, followed by a round of convergent ideas. These ideas are then simultaneously and anonymously voted on by the SLT and much of the virtual workforce (e.g., pod leaders) using a defined scale; the top ideas are then pursued. Innovation is evaluated in PMaps, personal development plans (see 5.1b[1]), making innovation an important way for employees to demonstrate that they are living the Novel Path at work. Employees who make significant

Figure 1.1-3 How Senior Leaders Set Organizational Environment

Organizational Objective	Processes/Environmental Supports
Organizational performance improvement	• Systematic DMAI • Lean/Six Sigma in targeted areas
Accomplishment of mission and objectives	• Weekly operational reviews • Monthly objectives reviews
Innovation	• Recognition of successful patents • Pathways Innovation Award • 10% employee time spent on new ideas and measured by PMaps • Bright Idea Award
Role-model performance leadership	• Leadership development • Succession planning • Leader rotations
Organizational agility	• Relatively flat and lean leadership; virtual workforce structure • Focus on time measurement
Organizational and workforce learning	• Continuous improvement • Personal development and expectation of new ideas documented through PMaps • Recognition programs such as Pathways Innovation and Bright Idea Awards • Process improvements shared via Knowledge Management Database

Figure 1.1-5 How Senior Leaders Create a Focus on Action

Area of Focus for Action	Processes Used
Accomplishing objectives	• Leaders participate in strategic planning and deployment. • Leaders review progress on plans monthly and report to employees at Triple-M meetings to reinforce actions.
Improving performance	• Leaders participate in process improvement reviews. • Leaders participate in weekly and monthly operational performance reviews.
Attaining vision	• Leaders encourage innovation by selecting Pathways Innovation and Bright Idea Award recipients and rewarding patents. • Leaders reinforce agility by requiring time metrics and focusing on time performance (i.e., meeting deadlines and cycle time performance targets).

contributions also may be recognized with the Bright Idea Award, for which they are nominated by their peers and supervisors, with selections made by the SLT. Novel Connect strives to always have a pipeline of innovative ideas.

Senior leaders create an environment for role-model performance leadership by making a significant investment in leadership development, planning for succession, using an assessment center for leader candidates, and rotating leadership positions. In addition, senior leaders take active leadership roles in industry groups and forums.

Consistent with Novel Connect's purpose and a core value, organizational agility is encouraged by emphasizing commitment to deadlines in all aspects of work. Processes all contain time metrics in addition to other relevant metrics. Since the leadership structure is deliberately flat relative to traditional manufacturing companies, Novel Connect has minimized the time it takes to make and implement decisions by reducing multiple tiers of management and distributing decision-making authority to the lowest appropriate level.

Novel Connect's senior leaders establish an environment for workforce and individual learning by requiring PMaps for all employees. These plans must address the Novel Path and are particularly

Figure 1.1-4 Communication Methods

Method/Description	Participants	Frequency
Brief meeting to discuss employee needs and get updates (usually via telephone but may be in person at pods or manufacturing sites)	Each employee, with formal leader (supervisor)	Weekly; more frequently, as needed
Conference call serving as a "line-up" between formal leader and workforce	All work-unit employees with their supervisors	Weekly
Novel Pathways intranet newsletter, offering routine information, operational updates, emphasis on a particular value, and recognition of performance	All employees and key suppliers with access to intranet	Weekly
Video discussions during Triple-M meetings of organizational performance led by senior leaders to provide key updates about customers and markets, review ethics and values, and recognize process improvements and innovation	All employees	Monthly
CEO/President's "Novel Notes" daily e-mails, which include important, breaking news such as acquisitions, new product launches, etc. For employees who do not have individual PCs as a function of their positions, PCs are available in their work units.	All employees and other key stakeholders	Daily
Key communications (such as CEO/President e-mails and key performance reviews) accompanied by "Leader Notes," which provide format, structure, and discussion questions to cascade information and encourage two-way communication	Formal leaders	Periodic
All-hands, virtual meeting for which employees have the opportunity to send in questions ahead of time or call in "live." The first-quarter meeting emphasizes goals and objectives for the year and reviews the prior year's performance. The third-quarter meeting is used to review progress towards strategic objectives, summarize the operational review, and discuss planning issues for the next year.	All employees; employees may attend in real time or participate by logging in to view the video stream after the meeting. "Attendance" is measured to ensure that all employees see the video even if they cannot attend the live presentation.	Semiannually in first and third quarters

rigorous for leaders. Organizational learning also is achieved by sharing the best practices of the award-winning employees and teams. Process improvements are shared virtually on the company's intranet immediately, as are results of After-Action Reviews, which take place after product launches and significant events. All work units (i.e., the Rochester headquarters facility/manufacturing plant and 11 pods around the country) are expected to try improvements to determine their viability in other areas. A Knowledge Management Database (part of the MAP database) has been implemented for easy capture and sharing of best practices, new ideas, and knowledge among Novel Connect's distributed workforce (see 4.2b).

Senior leaders personally participate in succession planning by conducting an annual review of all management positions and those of key individual contributors. Key employees are prepared for and rotated into lateral as well as promotional assignments. In addition, planning takes into account the needs at the pod locations, as well as the preferences of employees to be assigned to different locations. All formal leaders mentor at least one leader or aspiring leader who is not a direct report; the formal mentor program is led by the Chief Workforce Officer (CWO). The SLT participates in the selection of all leaders based on the needs of the work unit, succession plans, and progress on leaders' annual PMaps.

1.1b(1) Senior leaders communicate with and engage the workforce using a variety of methods (see Figure 1.1-4). Novel Connect communicates all decisions, along with the rationale behind each decision, to support the learning and growth of employees. The primary responsibility for communicating rests on an employee's formal leader, as survey feedback from Novel Connect employees has shown that they want information from their direct supervisors. Two brief weekly meetings (either in person or virtual)—one between the employee and supervisor and one between the entire work unit and the supervisor—are the key communication vehicles. These meetings are brief, but they maintain personal connections among people who may be far away from each other geographically. Every Novel Connect communication mechanism, even the company's newsletter, *Novel Pathways*, provides ways for employees to ask questions and suggest other topics, making all of Novel Connect's communication processes two-way. Frank communication is ensured through anonymous employee surveys on the intranet that provide real-time feedback on particular issues. These surveys include open-text fields for employee comments.

1.1b(2) Senior leaders create a focus on action using the processes identified in Figure 1.1-5. Performance reviews by senior leaders include operational performance and strategic objectives, as described in Categories 2 and 4.

Senior leaders create a focus on balancing value for stakeholders in their performance expectations by deploying the Novel Path to suppliers/partners and customers, by including representatives of suppliers/partners and customers in Novel Connect's strategic planning, and by locating liaisons at suppliers' sites. In addition, all members of the SLT spend roughly 25 percent of their time with customers or focused on customer-related issues.

Figure 1.2-1 Governance System Approaches

Key Aspect of Governance System	Approach
Accountability for management's actions	• The performance of the CEO/President is reviewed by the BOD, and the CEO/President consults with the BOD in performance reviews of the SLT through the BOD's Executive/Governance Committee. • Accountability for decisions is addressed in the PMaps. • This relatively flat company makes decisions at the lowest appropriate level.
Fiscal accountability	• Leaders participate in process improvement reviews and in weekly and monthly operational performance reviews. • Rigorous internal audits (through the BOD's Finance/Audit Committee) and external audits are conducted.
Transparency in operations	• BOD meetings are open, and the minutes are published. • Employees and stakeholders can request additions to the BOD agendas.
Independence in internal and external audits	• A rigorous internal audit program is in place. The Internal Audit Department reports administratively to the CF/AO but also reports the Audit Plan and results directly to the BOD. • Reporting systems were developed to comply with SOX.
Protection of stakeholder and stockholder interests	• Oversight is provided by the BOD. • Novel Connect complies with the Sarbanes-Oxley Act (SOX). • Stakeholder input is included in the SPP. • The SLT and employees interact frequently with customers, suppliers, and partners.

1.2 Governance and Social Responsibilities

1.2a(1) The company achieves key aspects of the governance system using the approaches listed in Figure 1.2-1.

1.2a(2) The BOD evaluates the performance of the CEO/President, who in turn evaluates the performance of the SLT and reviews those results with the BOD. The SLT reviews the performance of its direct reports. All formal leaders are required to participate in a 360-degree feedback process. This feedback provides the basis for review of behaviors, while results achieved on the Novel Compass provide the basis for the review of outcomes. All reviews are accompanied by an updated PMap development plan to identify the developmental focus for the upcoming year.

Figure 1.2-2 Addressing Regulatory Requirements and Risks

Processes/Regulatory Agency	Measures	Goals	Results
Wireless Telecommunications Bureau (WTB) of the Federal Communications Commission (FCC)	Accessibility	100%	7.6-4
Occupational Safety and Health Administration (OSHA)	Lost workday injuries	0	7.6-4
Environmental Protection Agency (EPA)	Voluntary reduction in hazardous manufacturing waste	30% decrease each year	7.6-4
Securities and Exchange Commission (SEC) and SOX	Noncompliances	0	7.6-4
IPC-A-610	Nonconformances	0	7.6-4
International Organization for Standardization (ISO) 14001	Maintain certification; nonconformances	100% 0	7.6-4
Help Desk Institute (HDI)	Maintain certification	100%	7.6-4
TL9000 and QuEST Forum	Maintain certification; nonconformances	100% 0	7.6-4
Go-Green/Grow-Green	Percentage of increase in waste recycled (goal is zero waste)	10% increase per year	7.6-4
Electronic waste—equipment recycled	Percentage of electronic waste recycled	2% increase per year	7.6-4
Energy efficiency	Percentage of noncarbon-based energy used	10% increase per year	7.6-5

The board holds an annual retreat where it reviews its own performance as well as feedback received from the SLT and reaches consensus on one or two improvement areas for that year. For example, recent commitments by BOD members include increasing their interaction with employees and other stakeholders by being more visible at company events or in communication vehicles. Beginning in 2007, shareholders at the annual meeting were asked to pilot an evaluation of the BOD's performance using touch screens. While this initial pilot was limited to those shareholders attending, the results of the survey provided useful feedback. Beginning in 2008, all shareholders will be invited to provide feedback on the BOD's performance via mailed and Web-based surveys.

Annually, the SLT reviews an aggregated summary of its performance review, aggregate 360-degree feedback, and results from the Trot Engage 14 (see 5.1c[1]) employee satisfaction survey, and it selects up to three initiatives to improve the leadership system. For example, the SLT has focused on improving communications since 2003, and results show improved satisfaction in this area.

1.2b(1) Adverse impacts of Novel Connect's products or operations are primarily issues related to the safe recycling of materials and potential hazards and accidents related to manufacturing. In accordance with the value of sustainability, Novel Connect is particularly concerned with protecting the environment by reducing waste and carbon emissions, as well as ensuring the safe reclamation and recycling of its products. It stays abreast of developments in these areas by participating in industry groups and being registered to the International Organization for Standardization (ISO) environmental management standard (ISO 14001), for which the company maintains an "audit-ready" state.

The company is striving towards zero waste and has established the Go-Green/Grow-Green Award to recognize employees for identifying new ways to save natural resources. Awards are given to individuals or teams. Novel Connect intends to eventually produce zero net waste and have all waste products recycled. The company is an active member of the Nevermore Association, which promotes and tracks business commitment to zero waste. Finally, while most other electronic equipment manufacturers have some recycling efforts under way, many charge customers a fee for taking back the equipment; Novel Connect takes back all equipment for safe recycling free of charge. As a result, Novel Connect's rate of safe recycling of electronic equipment is 37 percent, far above the rate of the top five companies in the industry.

Public concerns are identified through involvement in industry groups and by Customer Advisory Groups (CAGs) in each pod community. Quarterly CAG meetings not only provide input into design features but also help to identify issues important to customers and to those communities.

Novel Connect proactively uses resource-sustaining processes by designing manufacturing lines and facilities to use as few resources as possible and to reclaim energy when possible. For example, every U.S. facility has some percentage of energy supplied by solar power. The company always seeks to reduce its total energy usage, particularly from carbon-based energy sources. Materials used in the manufacturing process, such as solvents and other potential contaminants, are closely monitored. Manufacturing processes are designed to use as little of these solvents and contaminants as possible and to reuse and recycle materials that cannot be reduced. Sites maintain materials safety data sheets (MSDSs) for safety. Maintaining registration to ISO 14001 also helps the company's sustainability efforts.

Figure 1.2-3 Ethics: Processes, Measures, and Goals

Processes	Measures	Goals	Results
Ethics hotline	Confirmed ethical violations	N/A (not tracked; see explanation at 7.6a[2])	7.6-2
Ethics resolution	Days to resolve	14	7.6-2
Code of Ethical Compliance signed and returned: • Employees • Partners and suppliers	Percentage signed/ returned	100%	7.6-2

Having a virtual workplace for Novel Connect's nonmanufacturing employees started as a convenience to the founder and as a driver of employee satisfaction. But over the years, as protecting the environment became a prominent value for the company, allowing a virtual workplace for many Novel Connect employees became a key method to promote environmental sustainability as commutes (and thus carbon emissions) were reduced. The company has been recognized in several communities for its efforts. For example, Rochester, New York; Ann Arbor, Michigan; and Berkeley, California, have recognized the company for not adding congestion to their roads and for recycling waste (see 7.6a[5]). Other communities have bestowed local and regional awards on Novel Connect for its environmental sustainability efforts and results. The company's nonmanufacturing processes are designed to use as few resources and to produce as little waste as possible. Besides receiving local and regional awards, Novel Connect is an industry leader in product reclamation and recycling. Processes, measures, and goals for surpassing regulatory requirements and addressing risks are listed in Figure 1.2-2.

1.2b(2) Novel Connect promotes and ensures ethical behavior by reissuing its companywide ethics policy annually and requiring a Code of Ethical Compliance statement to be reaffirmed by each employee annually (see Figure 1.2-3). As described in Item 1.1, Novel Connect's SLT discusses Ethics Examples scenarios at monthly meetings.

The rotating Chief Ethics Officer role for a member of the SLT is unique at Novel Connect. One member of the SLT is appointed for one year, allowing a senior leader to lead the ethics process that year and assume responsibility for investigating ethical issues. In addition to ensuring the sharing of the workload of this assignment, the rotating approach has allowed Novel Connect to involve all senior leaders in ensuring ethical behavior and serving as personal role models. At this point, all senior leaders have served in this role at least once, with some having served twice. This rotating role has been featured in the industry publication *Telecommunication Today*, as well as in the national publications *Business Ethics* and *The Wall Street Memo*. A particular focus of

the SLT is ensuring the ethical compliance of partners/suppliers in other countries in which Novel Connect operates. Relationships and transactions initiated by Novel Connect in the offshore manufacturing facilities in China and India are scrutinized to ensure that they comply with the laws of the United States as well as align with the Novel Path.

Suppliers are required to sign the Code of Ethical Compliance as part of Novel Connect's supplier selection and procurement process; this compliance is reaffirmed annually. Novel Connect ensures that customers understand the company's position on ethics through its communications.

Potential ethical issues are reported through Novel Connect's ethics hotline or anonymously conveyed to the Chief Ethics Officer or direct reports. Resolutions of any issues are reported directly to the BOD first, then are shared with the SLT for learning and for use in Ethics Examples. Breaches are dealt with firmly and swiftly, with employment terminated for those found to have perpetrated ethical violations. There have been few such cases (see Figure 7.6-2).

1.2c Novel Connect actively supports and strengthens its key communities through monetary donations as well as employees' time. Novel Connect encourages employees to participate in their communities by making matching funds available for employees' charitable giving, as well as offering 16 hours of paid time off per year per employee for community service. The company also donates emergency-use cell phones to organizations supporting victims of domestic violence.

After years of giving generously to local communities, the company created the Novel Connect Foundation as an improvement in 2002. The foundation was established to develop criteria for causes aligned to the Novel Path and to coordinate and oversee funding. Since that time, foundation processes, activities, and funding have been evaluated annually to continue to improve and align support of the communities with the Novel Path. For example, the requirement that recipient organizations measure the impact of Novel Connect's contributions was added after a review of 2004 activities, when it was discovered that for some causes the effect of the donations made by the company (and other donors) was difficult to determine.

Today, causes receiving Novel Connect community support must be aligned with the core value of sustainability ("to sustain this world on the move"). The primary causes supported are invested in these areas:

- **Mobility:** seeking to overcome limitations to individual mobility and causes, such as traumatic spinal injury, multiple sclerosis, and other conditions or diseases
- **Environment:** advancing protection of the environment, particularly in lowering carbon emissions by not requiring commuting; by reusing; and by recycling
- **Education:** promoting learning in science, math, technology, and engineering (in both K–12 and higher education)
- **Safety:** seeking to protect workers from disabling injuries and the community at large from environmental hazards

The criteria for organizations that will be supported include the following:

- The organization's mission must be aligned with one of the areas above.

- In addition to making requests for monetary donations, organizations must

    - provide evidence of a highly effective and independent governance board

    - establish a measurement scheme to assess the efficacy of the intervention funded by Novel Connect

Key communities have been identified as the national organizations that address the areas identified above and the key communities in which Novel Connect's workforce is located.

Novel Connect's SLT members are expected to assume leadership roles in nonprofit organizations whose work is aligned with Novel Connect's core values on a national, regional, or local level, as appropriate—an expectation reinforced in SLT members' PMaps. Each senior leader is on the board of at least one national organization and at least two regional/local organizations. A full listing of SLT involvement is available on site; SLT involvement ranges from the CEO/President's chairing of the Telecommunications Forum to the CWO's serving as a member of an environmental advocacy organization's advisory board. Similar leadership roles are assumed by leaders throughout the organization at regional and local levels.

2: Strategic Planning

2.1 Strategy Development

Novel Connect understands that to remain competitive—even within its focused market niches—it must constantly monitor the changing cell phone industry, the emerging needs of customers, and the environment. The industry's constant change also drives Novel Connect's planning-time horizons and strategies: Novel Connect's short-term plans are limited to one year (with frequent reviews and revisions throughout the year), and its long-term strategies vary from two to three years.

Novel Connect's strategic challenges and advantages are listed in P.2b. The company defines its strategic objectives (see Figure 2.1-2) to address these challenges and to leverage and enhance its competencies and strategic advantages. The company is not trying to take over the top spot in the cell phone industry, but it realizes that it needs growth and regular investment to remain competitive. In general, Novel Connect's focus is on profit rather than on growth.

2.1a Starting in the second month of the company's first fiscal quarter, the Strategic Planning Process (SPP; see Figure 2.1-1) begins with a review and validation of the mission, vision, and core values (Figure P.1-1); core competencies; Novel Path; and company goals. Information is then gathered from Novel Connect's markets, customers/carrier, environment (such as regulations and industry trends), higher education partners, and manufacturing and distribution partners. The next step is to review the Product, Feature, and Process Development (PFPD) Process and associated results to ensure that new products and services are created that satisfy the needs of external customers and that work processes are executed to meet the needs of internal customers and the organization as a whole. Measuring Action and Performance (MAP) database analysis and reports, as well as Novel Compass (balanced scorecard) reports, are prepared for review.

To support planning decisions, Novel Connect relies on existing environmental and economic data, rather than generating primary data from research. Similarly, rather than conducting extensive market research, Novel Connect has elected to rely on the vast amount of cell phone industry data currently available to create a clear picture of its market direction and needs. Educational and other key partners provide location-specific and segment-specific information for planning. For customer satisfaction data, the company conducts in-depth VOC and other customer-related surveys (e.g., the Pulse and Allegiance Surveys, see 3.1a[2]); Novel Connect also solicits input from the CAGs. The SLT feels comfortable that these mechanisms provide adequate data to identify blind spots and to build plans that align with strategic priorities. For example, Novel Connect learned from its VOC mechanisms that it needed to provide phones that work worldwide. Based on this input, the company made a strategic decision to make all phones Global System for Mobile (GSM) communications-based, even though it currently only sells to U.S. markets.

After gathering data, Novel Connect's SLT leads a formal strategic-planning retreat (usually at a designated pod location for about two days). The intent of the retreat is to review, analyze, and align the input data to the mission, vision, core competencies, and company goals. The output of the retreat is the identification of Novel Connect's plan strategies: objectives, goals, and risks. Each objective is assigned to a member of the SLT, who is responsible for identifying a team (often a cross-functional team; see 6.2b) and collectively defining short- and long-term action plans that align with Novel Connect's profitability, capability, and sustainability objectives, as well as with the internal requirements of manufacturing and distribution. The action plans are then formalized with a deployment strategy and appropriate measures. Once completed, the SLT reviews and ratifies the plans. To ensure organizational alignment and the integration of organization-level performance measures to both key process performance and the strategic objectives, the SLT reviews and defines the key organizational performance metrics that are part of the Novel Compass balanced scorecard (see Item 4.1a[1]).

The SPP is usually completed by the end of the first month of Novel Connect's second fiscal quarter; the total elapsed time for planning is typically eight to twelve weeks. The key participants

Figure 2.1-1 Strategic Planning Process

Gather Customer and Carrier Inputs (February)
- VOC Surveys
- CAGs

Gather External Inputs (February)
- Market Trends
- Environmental Data
- Economic Data
- Niche Markets
- Higher Education Partners
- Manufacturing and Distribution Partners

Define S/L-Term Action Plans (April)
- Deployment Strategy
- Measures
- Timelines
- Accountability

Review, Analyze, Align to, and Input Data (February)
- Mission, Vision, Core Values
- Core Competencies
- Novel Path
- Company Goals

Conduct Process Review
- PFPD and Results From Customers, Carrier, and External Sources
- MAP
- Novel Compass
(March)

Review Internal Requirements (April)
- Mission
- Profitability Status
- Resource Capability
- Product Sustainability
- Manufacturing/Distribution Capability

Define Plan Strategies (April)
- Objectives
- Goals
- Risks

in planning are the SLT, members from key higher-education partner institutions, BOD members, and members from local workforce boards. Supporting participants include representatives from Novel Connect's carrier, key customers, manufacturing and other key partners (such as offshore suppliers), and subject-matter experts from niche markets.

Because the business is constantly changing, the company reviews the status and results of its action plans every month through the Triple-Ms (see 4.1a[1]).

2.1b Figure 2.1-2 identifies Novel Connect's current key strategic objectives, goals, implementation profiles, measures, and how advantages are leveraged and challenges addressed. A common thread in all objectives is the market-driven focus on short-term goals as the company selectively pursues long-term objectives.

Several issues in the cell phone industry represent challenges for the company and are therefore reviewed during strategic planning. One key issue is how the market drives the price of cell phones. The average price of phones has dropped about 16 percent over the last four years, but enhancements to and functionality of the phones have increased. This has challenged Novel Connect to reduce administrative and manufacturing costs to remain competitive but still have capital available to invest in new products and features that the market desires. Novel Connect's research indicates that the average price of cell phones will

remain stable over the next three years, but continued declines in cell phone prices may affect Novel Connect's profit objectives and/or its ability to continue investing in innovation.

Another key issue facing Novel Connect is the market penetration of cell phone manufacturers. If competitors decide to target the niche-market segments currently served by Novel Connect, the company could face major competitive pressure, impacting its ability to maintain overall market position. For this reason, the company continues to work with key customers and partners, involving them in strategic planning, so that it can react quickly to any changing needs and emerging competitive threats.

The third issue relates to how major cell phone providers identify and attract new workforce talent. Novel Connect has focused on employee satisfaction and engagement through the pod structure, the virtual and flexible workplace model, and workforce processes and policies (see Category 5) that enhance its culture and make Novel Connect more attractive to potential hires and current employees.

2.2 Strategy Deployment

2.2a After initial planning strategies are defined and internal capabilities are reviewed, the strategies are aligned and prioritized into focus items that support key company goals. Strategic objectives and action plans are then developed to form yearly

Figure 2.1-2 Strategic Objectives (continued on page 10)

Key Strategic Objectives	Key Company Goals	Implementation Profiles	Measures	How Strategic Advantages Are Leveraged/Strategic Challenges Are Addressed
Profit	• Maintain or exceed profit goals • Focus on margin rather than growth	• Manufacturing • New products • Enhancements • Value creation • Customer satisfaction	• Profit Before Tax (Figure 7.3-2) • Ratio of liquid assets (Figure 7.3-6) • Revenue from leading niche markets (Figure 7.3-7)	• Leverage business model innovation advantage to maintain balance between investing for the future and sustaining current business direction and goals. • Reduce administrative and manufacturing costs to address market-driven cost and penetration challenges.
Customer satisfaction and market position	• Provide every customer with cell phone excellence	• Changing demands of customers • Rapid response to changes	• On-time delivery (Figure 7.5-2) • Repeat and sustainable business (Figure 7.2-9) • Product reliability (Figures 7.1-1a–7.1-3)	• Leverage product/feature design innovation to maintain current levels of service while identifying new niche customer needs. • Address challenges of volatility in niche markets and market penetration by sustaining customers and providing reliable products.
Innovation, agility, and rapid response	• Identify new ideas • Commit to and meet customer-specified time frames • Define and penetrate new niche markets with innovative products	• Technology and resources	• Repeat and sustainable business (Figure 7.2-9) • Customer satisfaction (Figures 7.2-1–7.2-4) • Niche market share and diversification (Figure 7.2-12)	• Leverage business model innovation and supplier partnerships to keep pace with the changes and needs of the industry and lower costs. • Focus on the customer and the agility of the workforce to address challenges of communication, logistics, and protection of intellectual property.
Value creation	• Enhance value for customers, carrier, suppliers, and partners	• New requirements for customers • Enhanced relationships with carrier, suppliers, and partners	• Value Creation Index score (Figure 7.5-4) • Value Stream Effectiveness Index score (Figure 7.5-6)	• Leverage business model innovation and supplier partnerships to manage the carrier, suppliers, and partners to meet the needs of customers, while enhancing both business and relationship values. • Focus on value creation and effectiveness to address challenges of volatility in niche markets and channel variability.
Workforce satisfaction	• Provide every employee with better work, personal, and social environments	• New pod locations • Maintenance of virtual workforce guidelines	• Engage 14 satisfaction scores (Figure 7.4-2) • Employee retention (Figure 7.4-4) • Job vacancies filled from within or by employee referrals (Figure 7.4-6)	• Leverage business model innovation (virtual workforce) to attract and retain the workforce while meeting the changing demands of business and customers. • To address the challenges of the availability of a highly skilled workforce and communication, locate pods in university towns and identify employees who can work virtually from remote areas throughout the country.

Figure 2.2-1a Short-Term Action Plans (One Year)

Key Strategic Objectives	Action Plans	Deployment Strategies	Measures and Goals
Profit	1. Define monthly and quarterly profit targets. 2. Define monetary target for long-term investment strategy yearly, based on projected gross sales.	• Make every employee aware of the profit targets and available investment money within two weeks of action plan completion. • Meet with carrier and all key partners/suppliers and manufacturers within one month of action plan completion.	• 98% attainment of monthly PBT target • 100% attainment of profit vs. capital target (70/30 goal)
Customer satisfaction and market position	1. Identify the ongoing needs of customers and provide enhancements to meet those needs. 2. Provide reliable phones to meet the specific needs of niche-market customer base.	• Capture satisfaction data using customers' existing cell phones. • Poll 15% of cell phone customer base monthly (Pulse Survey). • Meet with key partners to solicit new inputs.	• <1% lost customers • >98% repeat business • >96% customer satisfaction results • 100% on-time delivery
Innovation, agility, and rapid response	1. Hire and maintain a high-technology workforce to meet the changing needs of customers. 2. Provide customers with phones that integrate technology enhancements and feature innovations to address specific niche-market requirements.	• Meet with education partners to define current resource needs. • Meet with niche-market partners (subject-matter experts) to identify technology advances, possible feature enhancements, and implementation requirements.	• 100% on-time commitment for new product enhancements • <1% lost customers • Maintenance of market position
Value creation	1. Review quarterly ongoing value improvements for customers, carrier, suppliers, and key partners; if necessary, define/align improvement programs. 2. Identify internal value-stream support targets quarterly; review and track these targets monthly. 3. Review and evaluate the need to further implement Lean/Six Sigma as a key process strategy.	• Meet with customers, carrier, suppliers, and key partners to identify value enhancements and strategies. • Meet with cross-functional teams to identify value-stream support targets and improvement strategies. • Implement, train, and evaluate Lean/Six Sigma process in local manufacturing/distribution site in Rochester.	• >98% achievement of goal of Value Creation Index • >98% achievement of goal of Value Stream Effectiveness Index • Go/no-go decision on Lean/Six Sigma expansion to all manufacturing and distribution sites.
Workforce satisfaction	Review satisfaction results and comments monthly; if necessary, define/align improvement programs to ensure that result targets are maintained.	• Capture satisfaction data using employees' existing cell phones; poll 20% of current employee base every month.	• >97% employee satisfaction results • >10 times more positive than negative comments

plans. Each short- and long-term plan is aligned with one of the company's strategic objectives, and each action plan is supported with both a deployment strategy and one or more measures to monitor progress. Monthly virtual review meetings are defined at this stage. Status data are uploaded to a secure intranet database using coded acronyms to describe the viability and/or progress of the objectives/plans. These status codes also are text-messaged to all participants before the meetings. Plan modifications and resource/funding allocation changes are based on the outcomes of these review meetings. The current short- and long-term action plans are described in Figures 2.2-1a and 2.2-1b, respectively. Customer-related, short-term action plans are

directed toward existing niche-market activity. Additional focus has been placed recently on the two leading niches: the personal consumer safety/security phone segment (*Novel Secure 1*) and the personal consumer *Phashion* phone segment (see 3.1a[1]).

To ensure that adequate funding and human resources are available to execute both the short- and the long-term action plans, the company follows a 70/30 guideline for short- and long-term strategies: When the long-term objectives and associated action plans approach 30 percent of the resource capability workload, Novel Connect reevaluates strategic needs and typically realigns, adjusts, or pushes out lower-priority, long-term plans.

Figure 2.2-1b Long-Term Action Plans (Two-Three Years)

Key Strategic Objectives	Action Plans	Deployment Strategies	Measures and Goals
Profit	1. Reduce cost of U.S. customer integration and distribution process. 2. Identify additional pods that align with growing niche market (safety/security).	• Review, analyze, and improve existing postmanufacturing integration and distribution process; if necessary, identify/procure new partners. • Identify three new strategic locations that align with the safety/security market.	• Reduce overall cost of integration and distribution by 15% while improving lead time to customers by 20%. • Procure, staff, and train workforce in new pod locations within eight months of locale decision.
Innovation, agility, and rapid response	1. Identify the need and feasibility to implement an additional technology center to keep pace with the changing needs of customers. 2. Review existing market segments and customer types (see Figure 3.1-1) to determine if modifications or expansion is necessary.	• Review and analyze the existing capability of the company's technology center; review whether a centralized center is adequate or whether distributed locations can better serve the needs of customers. • Propose changes to enhance existing center or create a distributed technology center.	• Complete analysis and decide on a centralized or distributed technology center approach to meet the rapid changes of existing and emerging customers.
Workforce Satisfaction	1. Identify better ergonomic programs for employees. 2. Identify health benefit enhancements and options for employees. 3. Identify benefits and disadvantages regarding FTE vs. independent contractor status.	• Review existing ergonomic and health benefit programs, and benchmark best-in-class programs to identify improvements and enhancements. • Review pros/cons regarding FTE status vs. independent contractor status; based on results, change policy to allow choice by workforce.	• >97% employee satisfaction results • >10 times more positive than negative comments

Currently, no long-term plans have been defined to directly address the customer satisfaction and value creation objectives.

Based on results from the monthly reviews, feedback is conveyed and changes are made to the existing action plans. The company's primary focus continues to be on the short term, as Novel Connect wants to maintain a competitive advantage and meet key company goals in an ever-changing environment. If long-term plans are delayed due to limits on resources or funding, strategies may be implemented or modified to free up resources.

Providing adequate human resources is a key requirement for meeting both short- and long-term action plans. The company has carefully selected its workforce locations (pods) around higher education institutions to partner with these institutions to offer internships. Novel Connect also has concentrated parts of its workforce in communities near high-tech cellular support providers (such as its carrier, distributors, and suppliers), which provides potential avenues to fill gaps in resource requirements. To keep up with changes in economic and labor markets, emerging businesses, and business environmental impacts, Novel Connect also partners with local workforce boards throughout the country.

As described in Category 4, the company's measurement system, MAP, is a real-time, enterprise-wide performance tracking and reporting system used to store and retrieve data and generate a balanced scorecard (Novel Compass) that defines key organizational performance measures. Novel Connect measures the successful implementation of the Strategic Plan through its ability to meet objectives and action plans, with the primary focus being on short-term company goals. The primary method of review is through Novel Connect's monthly review meetings (Triple-Ms). Prior to the monthly reviews, plans are reviewed, and status data are uploaded into MAP, along with any other pertinent feedback data. Data are compiled within MAP and coded to describe the status of the company's objectives and action plans and progress toward achieving them. Each member of the SLT is assigned a specific action plan and is held accountable for its success and for its alignment to the overall objective. SLT members also are responsible for the reviews and ongoing corrections needed for the success of action plans (see 4.1b[1]).

2.2b Each year as part of the SPP, Novel Connect compares the current performance of strategic measures against the measures of competitors and/or best-in-class companies. Figure 2.2-2 shows how Novel Connect's performance currently compares to relevant benchmarks and indicates projected targets for the next few years. To ensure that these targets are met, Novel Connect uses the monthly reviews to maintain focus on all its action

Figure 2.2-2 Performance Projections

Key Strategic Objectives	Measures and Goals	Short-Term (ST) & Long-Term (LT)	2007 Actual	Competitor/ Best in Class	2008	2009	2010	2011
Profit	• Attainment of monthly PBT targets met ….. 98%	ST & LT	94%	96%	96%	97%	98%	>98%
	• Attainment of profit vs. capital target (70/30) ….. 100%	ST & LT	90%	n/a	98%	100%	100%	100%
	• Reduce overall cost of integration and distribution ….. 15% (2007 base)	LT	2%	20% in 3 years	8%	10%	15%	
	• Improve lead time to customers ….. 20%	LT	0%	10% in 2 years	10%	20%		
	• Procure and train workforce in new pod locations ….. <8 months after locale decision	LT	10 months	n/a	9 months	8 months		
Customer satisfaction and market position	• Repeat business ….. >98%	ST & LT	96%	83%	97%	98%	99%	99%
	• Customer satisfaction results ….. 96%	ST & LT	95%	98%	97%	98%	98%	98%
	• On-time delivery ….. 100%	ST & LT	99%	99%	100%	100%	100%	100%
Innovation, agility, and rapid response	• On-time commitment for new product enhancements ….. 100%	ST & LT	96%	80%	100%	100%	100%	100%
	• Maintain market position	ST	7th largest	n/a	7th largest	7th largest	7th largest	7th largest
Value creation	• Achievement of goal of Value Creation Index ….. >98%	ST	89%	n/a	95%	98%	98%	98%
	• Achievement of goal of Value Stream Effectiveness Index ….. >98%	ST	92%	n/a	96%	98%	98%	98%
Workforce satisfaction	• Employee satisfaction results ….. >97%	ST & LT	98%	99%	97%	97%	97%	97%
	• Positive vs. negative comments ….. 10 to 1	ST & LT	6 to 1	10 to 1	10 to 1	10 to 1	10 to 1	10 to 1

plans and associated measures. On most measures, Novel Connect's performance is relatively close to (and in some cases, better than) selected benchmarks. However, where there is a gap, the team responsible for a particular action plan creates a "Get-Better-Quick" (GBQ) plan. These GBQ plans are reviewed every month as part of the normal review process. If the gap is long term in nature, the results and progress of the GBQ plan are reviewed at the next SPP, and new action plans may be initiated and/or additional resources identified.

3: Customer and Market Focus

3.1 Customer and Market Knowledge

3.1a(1) Before acquiring Sybil Cellcom, Inc., in 2000, Novel Connect began its product development process with Research and Development Team members identifying products and product features that they liked or members thought customers might like. To promote innovation, these team members were freely empowered to develop a product or feature and then hand it off to Marketing and Public Relations and Channel/Retail Sales Teams to search for customers who might want those features. For example, innovative products were targeted to early adopters; fashionable products to youth; and safety/security products to parents of preteens, to single females, and to senior citizens.

U.S. consumers typically buy new phones every 12 to 18 months to get new features, even if their existing phones are 100 percent functional. The postacquisition alignment process and SPP led the Chief Innovation Officer to reverse the sequence of Novel Connect's approach by incorporating input from customers and potential customers before identifying potential products and product features.

Now, as part of the ongoing customer survey process and during the SPP, the Marketing and Public Relations Team reviews existing market segments, product features, and price points for ongoing relevance and identifies new market segments to target and product features to add. Data and information from these processes are then fed to the Product Engineering and Design Team for product and feature development. These processes have matured to the extent that innovative niche product/feature design is considered a core competency (see Figure 6.1-1). However, Novel Connect does not develop

features for the sake of developing new features: its strategy is to build the company around the customer, not around the product.

Novel Connect currently focuses on seven key customer niche groups, which are subsegments of the three main market segments identified in P.1b(2): personal consumers, business consumers, and government consumers. Figure 3.1-1 shows these customer segments' key requirements and preferred phone features.

While the product coverage is broad, Novel Connect still maintains a niche mentality in the way it addresses each segment. This has enabled the company, along with its carrier partner Innovular, to maintain close relationships with its end customers.

The new, more structured approach to identifying customers and market segments enabled Novel Connect to take advantage of shifting market factors earlier this decade that led to explosive growth within its (current) two leading segments: personal consumers seeking safety/security phones in the *Novel Secure 1* line and personal consumers seeking *Phashion* phones in the *Novel Complete* line.

Novel Connect's early safety and security phone features led the company to develop innovative phones that could send and receive safety/emergency-related calls, which, in turn, led to encrypted security phones. The business/government consumers and government consumers market subsegments saw exponential growth following the events of 9/11. In another key market segment, several popular Generation Y (Gen Y) celebrities and athletes were spotted, photographed, and videoed while using Novel Connect's *Phashion* phones in 2002 and 2003, and the growth of the personal consumers market subsegments skyrocketed.

Consistent with its image of being on the leading edge of technology, Novel Connect makes it a priority to stay on the leading edge of marketing as well. It surveys its existing customers and conducts virtual focus groups via the Web and video phones to determine which features customers like in current phones and which new features they would like to see in future phones. Through its distributed workforce and quarterly CAG meetings, Novel Connect plans to seek the same information from customers of competitors.

Traditional mass media advertising (print, radio, and TV) to promote the brand currently accounts for 20 percent of the advertising budget. Use of viral marketing (posting on youview.com and blogs, tapping into social networking, sponsoring Gen X and Y events, having Gen Y-age staff visit entertainment events to demonstrate phones, etc.) is a key marketing strategy at Novel Connect, accounting for 80 percent of advertising expenditures. This demonstrates a significant investment, considering that outlets such as youview.com and blogs are essentially free.

One primary investment in this area has been Novel Connect's position as the official wireless communications sponsor of the Summer and Winter Solstice Games (Sol Games). These are the action sports equivalents of an annual professional Olympics and are held during the weeks of the summer and winter solstices. Since 2002, Novel Connect has provided free phones to the Sol Games' staff and employees, as well as all of the participating

U.S. athletes, their coaches, their agents, and their immediate families. The demographics are an excellent fit for Novel Connect's market goals. These groups span the spectrum of Novel Connect customer types from *Novel Secure 1* phones for the security staff to the *Phashion* phones of the *Novel Complete* line for the athletes. In return, Novel Connect gets an incalculable amount of viral buzz marketing from high-profile individuals with new phones.

Novel Connect also has had Brian Burns (better known within the action sports world as BB), a motocross event specialist, and his twin sister Geri Burns (GB), an aerial snowboarder, under personal-services contracts during the games. Novel Connect and its carrier have capitalized on the theme of "Air Time," which links an exciting portion of these events and cell phones. In particular, Novel Connect sponsors a highly successful pre- and postcompetition promotional contest during national aerial snowboarding events. First, Novel Connect sets up a Web site for anyone (not necessarily a Novel Connect customer) in the United States to register a cell phone number(s). Then during warmups, using a Novel Connect phone, GB calls one of the numbers (selected at random) as she goes down the slope toward the ramp. This is designed to demonstrate hands-free ease of use. The person answering wins a free Novel Connect phone of his or her choice. If the phone is answered while GB is still in the air, that person wins a free phone and free air time for a year. This is designed to demonstrate the phone's speed of connection. The buzz from the first attempt at this promotion resulted in a pre-Christmas sales increase of 37 percent over sales for the same period in the prior year and a return on investment on the promotion of over 300 percent. Now fans lining the slopes before and after events chant "Air Time, Air Time," wanting to see GB make another jump-call. More than 110 video clips, with hundreds of thousands of views, from the Sol Games and these Air Time events have shown up on youview.com over the past two years.

Novel Connect also utilizes four blogs to promote the company and its products. The CEO/President produces a weekly blog about the company and its products. Discussions in this forum reveal that her audience is primarily professional women, environmentalists, and Wall Street workers. The Vice President of Product Engineering and Design also has a popular blog. Due to the pioneering and innovative features he has been responsible for developing and bringing to market over the past few years, he is approaching rock-star status among the engineering and technophile communities. He uses this platform to bounce new ideas off customers and promote new products. Novel Connect bloggers' awareness that competitors are lurking in the background reading these blogs makes the choice of words an interesting challenge. In addition, BB and GB each have their own respective blogs and, as part of their contracts, periodically reference Novel Connect's products in them.

In line with the value of innovation, all employees have three roles: employee, customer, and salesperson. Employees are considered part of the sales staff since everyone they meet during the course of their daily lives is a potential customer. Employees are initially trained in "Sales 101" and provided with a bulleted list of key discussion points. The sales staff also sends out brief monthly

Figure 3.1-1 Customer Groups

Market Segment	Customer Type	Key Requirements and Expectations	Phone Features/Attributes	% of Revenue
Personal consumers	Students in Gen Y	• Ease of use • Trendiness • Convenience • Reliability (i.e., no dropped calls)	• Leading-edge technical features • Fashionable look • Online social networking capability	38%
	Celebrities, including sports stars	• Ease of use • Trend setting • Secure/encrypted data and transmission • Reliability	• Leading-edge technical features • Fashionable look • Online social networking capability • Personal data encryption	
	Preteens ("tweens" and "subtweens" of ages 9–12), single adult females, elderly, disabled	• Ease of use • Personal/home safety and security • Low cost • Reliability	• Direct-connect capability to parent/adult guardian or significant other • 911-direct connect (e911) • Long-life battery	
Personal/business consumers	"Outdoors people" (e.g., hikers, bikers, skiers, boaters, surveyors, construction workers, foresters)	• Personal safety and security • Reliability • Ruggedness	• e911/GPS • Long-life battery • High-power battery • Walkie-talkie capability • Impact-resistant • Waterproof	10%
Business consumers	Truckers, taxi drivers	• Ease of use while working • Reliability • Ruggedness	• Hands-free operation • Walkie-talkie capability • High-power battery • Impact-resistant • Waterproof	12%
Business/ government consumers	Emergency services workers (e.g., ambulance, police, fire, search and rescue, and National Guard personnel)	• Ease of use • Reliability • Data and voice capability • Sustained signal/strength across distances • Secure/encrypted data and transmission	• Hands-free operation • Long-life, high-power battery • Direct-connect capability to e911/GPS data from personal/home safety and security callers • Secure/encrypted transmission • Secure/encrypted on-board data	16%
Government consumers	Department of Homeland Security	• Reliability • Security • Data and voice capability • Secure/encrypted data and transmission	• e911/GPS • Long-life battery • Secure/encrypted transmission • Secure/encrypted on-board data • Hands-free operation • Walkie-talkie capability	24%

text and video messages to all employees with sales tips, competitive and market information, monthly specials, new product news, new discussion points, and so forth. All employees also are customers and therefore are provided with free mobile phones.

3.1a(2) Gathering the voice of the customer (VOC) has matured to become an important part of Novel Connect's (and Innovular's) market approach (Figure 3.1-2). It also provides input into the Product, Feature, and Process Development (PFPD) Process (Figure 6.1-4). Data gathered during these processes are analyzed and fed into the MAP database for use in process improvement, planning, and decision making consistent with the Novel Path. Data are segmented by customer types.

In close cooperation with its carrier, Novel Connect monitors and manages several VOC processes (as shown in Figure 3.1-2).

Market Research: Novel Connect's Market Research Process consists of primary and secondary market research and analyses conducted by a small group within the Marketing and Public Relations Team. These employees purchase industrywide marketing studies, as well as participate in industry groups and monitor current and emerging trends in a number of consumer, business, and government arenas. They also monitor and analyze other data (see 4.1a[2]), including usage data provided by carriers in the industry.

Customer Surveys: Novel Connect considers its partnership with Innovular innovative for the wireless communications industry. The relationship enables better coupling of service to the end customer than most of Novel Connect's competitors provide. Novel Connect and Innovular share common beliefs about customer relationships and cooperate in many ways that phone providers and carriers rarely do. For example, they both feel strongly that they must first anticipate, and then understand, customer expectations in order to exceed them. They both also strive beyond achieving customer satisfaction to secure customer loyalty.

Together they have designed three surveys to measure/monitor key dimensions of the customer relationship from multiple viewpoints and time frames. These different viewpoints also help to uncover and address blind spots. Innovular provides the customer database, and Novel Connect manages the surveys.

The first survey is the ongoing Won Business Survey. It is administered to all new customers at the time of purchase/activation or by automated call or text message during the setup/initial registration process. This survey seeks to determine why customers chose Novel Connect/Innovular, gathers preferences for the method and frequency of future interactions, determines customers' expectations, and examines customers' satisfaction with the buying experience.

The second is the ongoing Pulse Survey. This brief, tactically oriented monthly survey is designed to gather real-time loyalty and phone performance data from a random selection of customers. The survey is deployed directly on the device, according to customer preferences determined in the Won Business Survey.

The third type of survey is the annual in-depth Allegiance Survey. It is by far the most detailed and the most strategically oriented of the three surveys. Conducted by an independent third party, it is designed to determine the status of longer-term factors affecting customer loyalty, retention, and likelihood to refer (see Item 3.2).

Customer Advisory Groups: Quarterly meetings are conducted with CAGs in each pod community; in 2007, a total of 156 CAGs were conducted companywide. These groups consist of leading-edge users who provide direct input on products and services in return for first releases of new products and services. By taking advantage of the distributed workforce, CAGs enable Novel Connect to simply, systematically, and regularly stay in close contact with diverse customers across the nation. Formal meetings are typically held in the second month of each quarter. The meetings follow a standard agenda centered on a quarterly theme. For example, the first quarter meeting focuses on pricing, the second quarter on physical packaging/styling, and the third quarter on features and usability; the fourth quarter focus varies each year to address emerging industry trends or the particular needs of individual pods. Facilitation of the meetings is considered a career growth opportunity within Novel Connect and rotates on a yearly basis among pod and cross-functional team members.

Customer Relationship Management: Novel Connect takes pride in its customer relationship management processes. One key element of these processes is gathering loyalty information from end customers in conjunction with Novel Connect's carrier and its

Figure 3.1-2 VOC Processes: Five Voices of the Customer
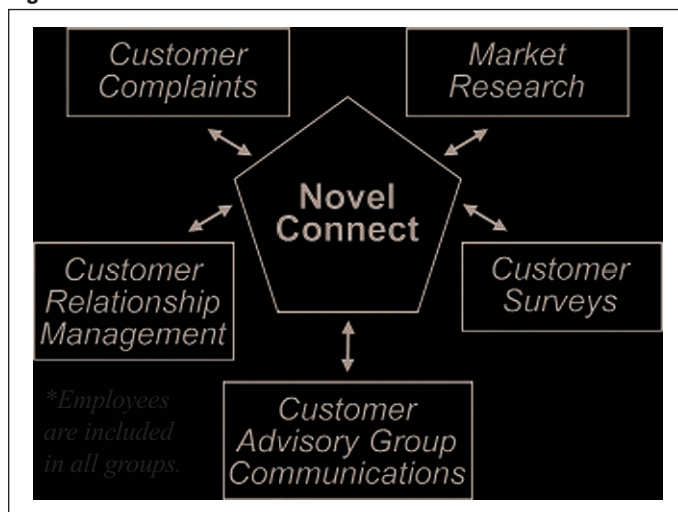
call center, as well as from social networking and during sponsored events (see Item 3.2).

Customer Complaints: Complaints typically revolve around three areas. The first is usability. These complaints are gathered from the call center or visits to the retailer/carrier and are often resolved with on-the-spot education for the customer. Data from these complaints are fed back into the PFPD Process to improve usability and to the technical communications group to improve user manuals, Internet online help, and context-specific device help. The second is phone failure. This complaint is generally the result of breakage or damage. The third major type of complaint is dropped calls. Data on this type of complaint are critically important to Novel Connect because carriers are very sensitive to dropped calls, especially those caused by poor phone or antenna design.

3.1a(3) All VOC data are analyzed and systematically fed to the Strategic Planning Process and the PFPD Process as needed. These data also are available to all employees in analyzed form on the MAP for process improvement projects. In addition, data are systematically fed to the Customer Service Team (which oversees the call center), the call center, and Novel Connect's retailers and carrier on a quarterly basis for use in their planning and improvement processes.

3.1a(4) The Allegiance Survey is conducted in the fourth fiscal quarter. The data are used as input to the annual formal Improvement Day held by the Marketing and Public Relations Team survey process owners and other internal stakeholders. To improve the survey itself, one of the standard questions asked is "How can we better listen and learn of your needs and future directions?" The results of the survey and the output of the Improvement Day become input to the SPP.

3.2 Customer Relationships and Satisfaction

3.2a(1) The success of Novel Connect's niche focus is based on customer relationships. Close customer relationships with and through its carrier are seen as differentiators from Novel Connect's larger competitors. Since the founding of the company, the SLT has set a high standard of customer service that is shared with the company's retailers and carrier.

Due to their multiple roles, all employees share responsibility for customer relationship management; however, the Marketing and Public Relations Team leads the efforts. This team is geographically distributed across the pods to ensure adequate end-customer focus in all markets.

Novel Connect believes that customer *satisfaction* is a feeling but that customer *loyalty* is a behavior. Therefore, customer satisfaction is not sufficient for success; rather, customer loyalty is seen as essential to achieving the organization's vision. Novel Connect defines loyalty as repeat purchases and as a rating of four or five (on a five-point Likert scale) on the likelihood-to-refer question in the Allegiance Survey.

Multiple methods are used to build and maintain close relationships with each of Novel Connect's customer types. The CAGs are the primary way Novel Connect stays in close touch with a geographically diverse cross section of leading-edge users. The company also has specifically designed features into some phones to promote relationship building. For example, most phones have one-button access to Novel Connect's call center to encourage ease of access and relationship building. Along with the carrier and with end-customers' permission, Novel Connect tracks usage trends, phone performance, and carrier performance. Likewise, through permission marketing, Novel Connect sends voice messages, text messages, and short streaming videos to its customers' phones. These brief messages include advertisements, coupons, new-product announcements, and contests/promotions, all designed to build relationships and reinforce repeat-buying behavior.

Novel Connect works in conjunction with its retailers and carrier to ensure that a consistent message and consistent product and service quality are delivered at all times. For example, the Channel/Retail Sales Team shares pertinent portions of the output of the SPP with all retailers and the carrier. In many cases, the reverse is true as well. Retailers and the carrier have invited Novel Connect to participate in their planning processes.

3.2a(2) Key access mechanisms include the call center, retailers, and the Internet. Customers can connect directly to the distributed call center employees via their phones. Call center employees are cross-trained in the technical and commercial aspects of the business to try to resolve customers' calls the first time, without transferring them. Likewise, retail and carrier employees are trained to handle both the technical and the commercial aspects of customer needs. The Novel Connect Web site contains an interactive feature that allows real-time "chatting" between the customer and a customer service representative. Key contact requirements have been gathered over time from customers' surveys, through focus groups, and through benchmarking the retail sales and call center industries.

3.2a(3) Complaints are one of the five main "voices" of the customer (shown in Figure 3.1-2). All complaints are handled through the online Customer Complaint Handling Process (CCHP). The CCHP was benchmarked from a former Baldrige Award recipient and is "owned" by the Customer Service Team. Complaints are systematically segmented, categorized, logged, tracked, resolved, and revisited with follow-up to ensure closure and complete customer satisfaction.

End-customer complaints come in through customer service staff, the Web site, the call center, CAG meetings, employees, and the three surveys. The individual receiving the complaint is responsible for entering it into the CCHP and closing it out with the customer. All employees are trained in the CCHP and get follow-up training annually. If the complaint is an isolated case and/or it can be resolved by the person receiving it, this is done, often on the spot. More in-depth or cross-cutting complaints are assigned through an algorithm within the CCHP software to an appropriate individual for resolution. All employees also are trained in problem-solving techniques to help them resolve complaints as quickly and effectively as possible. An escalation procedure is built into the software in the event that the complaint is not resolved within the agreed-upon time frame.

Retailer complaints can reach Novel Connect through the same channels that end-customer complaints travel, but typically the former go to the Channel/Retail Sales Team. Depending on their nature, retailer complaints typically are assigned to this team, but they can be assigned to anyone within Novel Connect.

Product safety complaints and failures of safety/security phones are handled through an expedited and carefully controlled and monitored process. For obvious reasons, this type of complaint moves to the top of the complaint resolution queue. They are routed immediately and directly to the VP of Quality/Safety, who assigns someone from within his organization to resolve them.

Service complaints are logged into the system and follow a standard service-recovery process. Not all service complaints involve issues with Novel Connect's phones and/or accessories, as some involve problems with the carrier that cannot be fixed by Novel Connect. These are forwarded to the appropriate entity by the Channel/Retail Sales Team, but they are still tracked by the individual originally receiving the complaint to closure through the CCHP system.

3.2a(4) Because Novel Connect is not one of the largest players in the industry but is on the leading technological edge, keeping relationship-building approaches and customer access mechanisms current with changing needs is embedded in the culture, as reflected in the value statements in Figure P.1-1. This begins during new-hire orientation and is reinforced daily by the corporate and pod leadership. The CAGs also perform a vital role in this process, as these customers tend to be early adopters and leading-edge thinkers. Their actions and relationships with the company are carefully monitored within each pod and aggregated across the pods as a forward-looking predictor of the entire customer base.

3.2b(1) Customer satisfaction, dissatisfaction, and loyalty data are captured through four of the VOC processes. The fifth process, market research, is used to provide comparison data for the other four processes.

The Customer Service Team is responsible for administering the Pulse Survey. Using the frequency-of-contact preferences provided during the Won Business Survey, customer service staff select a random cross section of the customer base each month. The customers receive either an e-mail, a phone call, or a text message (depending on their preference) asking if they would be willing to participate in a brief, ten-question survey (see Figure 3.2-1).

Figure 3.2-1 Pulse Survey Question Topics

Phone	Relationship
1. Quality	6. Call center
2. Usability/features	7. Communications
3. Battery	8. Price
Service	**Other**
4. Reliability (dropped calls)	9. Overall satisfaction
5. Call clarity	10. Additional comments

If the customers say "yes," they are linked to an automated voice response survey or a Web-based survey. Unless customers respond anonymously, they are cycled back into the survey list in accordance with their preferences. If customers do not answer or do so anonymously, they may be selected again the next month. Nine of the questions are quantitative; there are eight product- and service-related questions and an overall satisfaction question. The last question is an open-ended question, giving the customers the opportunity to comment on any topic. The questions dovetail with the Allegiance Survey questions, enabling Novel Connect to react and respond quickly in its fast-moving markets.

Likewise, the Allegiance Survey contains both quantitative and qualitative questions. The same customer database and same selection process is used for both the Pulse Survey and the Allegiance Survey to avoid "oversurveying" any individual. Novel Connect and Innovular remain anonymous in the Allegiance Survey process by hiring a third-party firm to seek out and conduct the survey (a process learned from a Baldrige Award recipient).

The quantitative questions in both surveys are based on a five-point Likert scale, with five being the highest rating. Central to the analysis and follow-up is that a rating of three is not considered neutral. As stated earlier, Novel Connect and Innovular operate under the theory that merely satisfied customers are not necessarily loyal. So a rating of three is treated the same as a rating of one or two. All answers of three and below are considered to indicate dissatisfaction and require formal follow-up through the CCHP.

Novel Connect learned this lesson the hard way in 2002 from an important customer in the business consumers market segment. This organization, although consistently providing ratings of three, was presumed to be loyal because it had remained a customer for three years (one with Sybil); however, after this customer canceled its rather large contract with Novel Connect, follow-up by the Channel/Retail Sales Team revealed that this customer was never loyal. Cell phones were becoming an increasingly important part of its business, and the company left as soon as it found what it considered to be a better product.

Dissatisfaction also is measured by complaints to retailers and the call centers. The CCHP has a data analysis module that provides a monthly snapshot of customer dissatisfaction implied by complaints.

3.2b(2) Follow-up with customers occurs systematically through the Won Business and Pulse Surveys. It also occurs routinely through daily interactions with the call center and the Web. New customers are surveyed immediately to determine their satisfaction with the buying experience and their "hot buttons" relative to phone features and performance. The ongoing Pulse Survey continuously monitors customer sentiment.

3.2b(3) The market research "voice" of the customer provides broad comparative industry data that are used in the SPP. In addition, one section of quantitative questions in the Allegiance Survey asks the customer to rate 11 dimensions of product and service quality (see Figure 7.2-11). It asks for ratings on how well Novel Connect, and any competitor(s) with which the customer is familiar, is doing in meeting expectations. This allows Novel Connect to collect direct, competitive comparisons without incurring the expense of conducting a separate "competitor" survey. It also asks which of the dimensions is the most important to the customer. The ratings data are segmented and aggregated by customer type and are displayed on an x–y scatter plot (see the blank Competitive Position Chart, Figure 3.2-2). The importance data also are segmented and then used as input in the SPP and new product development.

For the Competitive Position Chart, Novel Connect's rating for each variable is plotted on the vertical axis; the competitor's rating is subtracted from Novel Connect's rating and the result is plotted on the horizontal axis. If the competitor scored higher than Novel Connect, the horizontal axis value is negative; if Novel Connect scored higher than the competitor, then the horizontal axis is positive. Therefore, the upper-right corner becomes the "good" corner, and the lower-left corner becomes the "bad" corner. Therefore, with a quick glance at results on this chart (e.g., see Figure 7.2-11 or Figure 7.2-12), one can tell how well Novel Connect is doing on any of the 11 key dimensions measured by the Allegiance Survey.

Figure 3.2-2 Competitive Position Chart
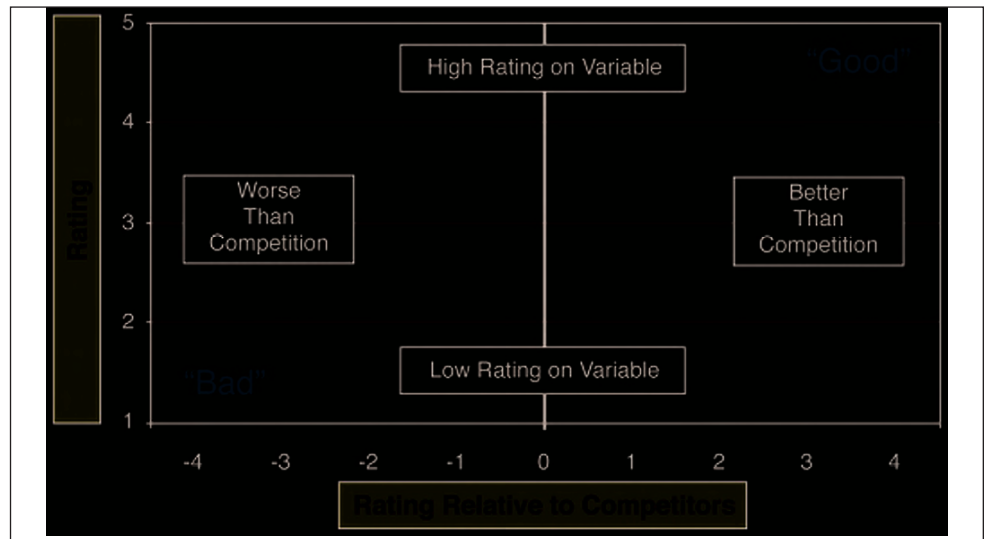
3.2b(4) The Marketing and Public Relations Team reviews all VOC processes, including the satisfaction and loyalty determination processes, at least once annually for effectiveness through the PIP that precedes the SPP. Data from the three main surveys drive these reviews. In particular, the Allegiance Survey contains the question, "How can we better learn of your satisfaction and loyalty relative to our products and services?"

4: Measurement, Analysis, and Knowledge Management

4.1 Measurement, Analysis, and Improvement of Organizational Performance

4.1a(1) Data and information for tracking (1) overall organizational performance (including key work process performance indicators) and (2) performance against strategic action plans and achievement of strategic objectives are selected by the SLT. They are tracked in Novel Connect's electronic MAP (Measuring Action and Performance), a real-time, enterprisewide performance tracking and reporting database managed by the Information Technology and Internal Communications (IT/IC) Team. MAP is a sophisticated data-warehousing software application that gathers most of the company's key operational data for widespread use and analysis. The key organizational performance measures for analysis make up the Novel Compass, a balanced scorecard for the company.

To ensure that the Novel Compass scorecard includes appropriate leading and lagging indicators and that organization-level performance measures integrate key process performance and strategic objectives (as well as to ensure organizational alignment) organizational metrics are selected during the defining of short- and long-term objectives and action plans step of the SPP, when Novel Connect is projecting future performance. Information used in this selection process includes the following: (1) analyses of past results for each key business process and for all current key organizational performance measures; (2) analyses of past linkages—and cause-and-effect relationships—among key processes and business performance results; (3) competitive and/or comparative benchmark information for every key process and for most key business measures; (4) projections of future performance of key processes; and (5) analyses of the potential impact of projected key process performance on strategic objectives, short- and long-term goals, and projected organization-level performance. Before the Novel Compass scorecard is finalized, senior leaders validate that organizational performance measures address all principal success factors (see P.2a[2]), as well as the needs of all key stakeholders (key target/niche markets, key customers, key partners and suppliers, and employees; see P.1b[1–4]). SLT members confirm that the key requirements for each of Novel Connect's key stakeholder groups link to one or more of the organizational performance measures. In this way, senior leaders select and validate the data/information streams that are captured in MAP and will roll up to Novel Compass metrics.

Organizational performance measures reviewed by the SLT each month are shown in Figure 4.1-1. These include several key work process outcome measures and targets, key strategic action plan measures and targets, and key financial performance measures and targets.

Individuals, process leaders, pod leaders, and project leaders enter performance data into MAP on a real-time, daily, or periodic basis (as appropriate for work-process cycle time or for monthly monitoring of action plan progress; see Figure 4.1-2 for the databases within MAP). Real-time, in-process data for several manufacturing performance measures are automatically uploaded to MAP by special software interfaces that allow plant-floor process logic controllers (PLCs) to communicate with Novel Connect's PC-based software platforms. When instructed by a user with the appropriate access clearance or user profile, MAP will generate automatic daily, weekly, and/or monthly performance summary reports for individuals, process leaders, project leaders, and senior leaders. MAP integrates data from key processes and automatically runs these routine reports—called Novel Compass process scorecards—which may include predefined statistical analyses such as ranges, averages, and sigma levels, as well as comparisons to goal. Novel Compass scorecards for key processes are available to be viewed on demand by individuals with approved access, and reports can be attached to e-mails that can be programmed in MAP to be sent automatically to approved receivers at regular intervals. Through this same approach, MAP automatically generates and distributes the monthly organizational Novel Compass scorecard to the SLT. Likewise, supplier scorecards are distributed to Novel Connect's key manufacturing partners and carrier service.

Figure 4.1-2 Databases Within MAP

Customer Complaint Database
Knowledge Management Database
Performance Improvement Database
Process Improvement Database
Waste Event Database

The SLT uses the Novel Compass scorecard, along with each leader's customized key process summary performance reports, to review organizational performance at monthly Triple-Ms. This information is used to assess progress on strategic action plans, to monitor key work system and business process performance (including new features and product roll-outs), and to initiate adjustments in plans and/or resource allocations, as needed, to sustain or change performance levels. Adjustments in strategic action plans and related adjustments in performance goals are communicated to the appropriate individuals, work areas, and project leaders by senior leaders in weekly one-on-one meetings and/or work-group meetings with pod leaders. Adjustments to performance goals are then made in the MAP database, as appropriate.

Individuals, workgroups, team leaders, pod leaders, and project leaders receive process and project results from MAP in

customized reports (i.e., Novel Compass scorecards) that are specific to their respective work processes. Senior leaders use these Novel Compass scorecards to make decisions about production scheduling, staffing (see 5.2a[1]), resource management, project management, and process management, and to drive process improvement and innovation (see 6.2). Data and information that support improvement and innovation also are available to select individuals, team leaders, pod leaders, and project leaders via Novel Connect's PIP database (see 6.2a[1]). In addition, Improvement Reports, summaries that capture key learnings from process improvement projects (e.g., from cross-functional teams), are available to all employees, are cited in the "Novel Notes" daily e-mail communication, and may be copied to key partners and suppliers; these reports have been scrubbed of proprietary or sensitive information.

4.1a(2) Competitive and/or comparative benchmark data and information for key process and business measures are reviewed and selected during the defining of short- and long-term objectives and action plans steps of the SPP, when key Novel Compass organizational measures are determined and strategic goals are established.

In addition, the Marketing and Public Relations Team continuously conducts competitive product, service, and market analyses, using data from sources that include Novel Connect's three customer surveys (Won Business Survey, monthly Pulse Survey, and annual Allegiance Survey, see 3.1a[2]), the call center, retailers, industry marketing studies, carriers, competitors' prospectuses and financial reports (if public companies), and CAGs. These analyses are used semiannually in strategic planning and are used by the Marketing and Public Relations Team in market and key customer selection and by the Research and Development and Product Engineering and Design Teams in new product and feature design and development. In addition, analyses serve as input to the PFPD Process (see Figure 6.1-4). Further, to stay current with emerging and changing technologies, the Research and Development and Product Engineering and Design Teams constantly scan for benchmark information and data by attending trade conferences; sharing subscriptions to technical, scientific, and trade journals; and encouraging employees to attend continuing education courses.

Semiannually, in conjunction with the SPP, the Chief Workforce Officer (CWO) and her staff select comparison data and information from many sources (e.g., benchmark exchanges, various human resource and organizational effectiveness journals, insurance providers, and public/governmental Web-based databanks) to identify opportunities for improvement in workforce-related processes (e.g., benefits, work system design, satisfaction determination, productivity measurement, and training/development effectiveness).

Except for product, service, market, and human resource data and information, comparative information used in process management (including supplier performance comparisons) is selected at the work process level by team/project leaders and pod leaders. Senior leaders collect their key process comparison data and information and bring this knowledge into the SPP for determining performance goals. In addition, senior leaders bring this knowledge to the Triple-M meetings to drive process improvements and make strategic action plan modifications.

4.1a(3) Metric selection for Novel Compass is revisited and validated by the SLT during regular Triple-M virtual meetings. During these meetings and in addition to the Novel Compass performance review, senior leaders monitor progress on strategic action plans and analyze business environment factors that are discovered through the competitive product, service, and market analyses (conducted by the Marketing and Public Relations Team) and through technology scanning (conducted by the Research and Development and Product Engineering and Design Teams). If these reviews indicate that a Novel Compass metric should be revised or added, the SLT will communicate this to the appropriate key processes/project leaders, who provide the source data to MAP. SLT also directs the IT/IC Team to develop appropriate MAP programming and data links to generate report summaries needed by process or project team members, leaders, and SLT members.

4.1b(1) Senior leaders use three approaches to review key organizational performance results that are provided via MAP and the Novel Compass scorecard. First, MAP captures real-time or near-real-time performance data and information, and it uses preprogrammed analyses (e.g., trends, statistical process control [SPC] charts, and Pareto charts) to create reports that enable all employees to regularly access and review organizational performance results on an ad-hoc basis. Individual SLT members conduct specific additional analyses on a per-function or per-work process basis, and they use these analyses to manage and improve performance in their areas of responsibility, as well as to prepare for Triple-M meetings.

Second, small subcommittees of the SLT focus on specific strategic action plan projects as appropriate for their areas of responsibility and their individual performance assignments. These senior leaders will conduct virtual meetings as necessary to monitor progress, either with project leaders or with entire project teams, and they review and analyze specific subsets of Novel Compass metrics. Other process leaders may be brought into these weekly meetings to provide additional and background information, as well as status updates. The SLT subcommittee members then facilitate a review of the progress on their assigned strategic action plans at the Triple-M meeting each month.

Third, the SLT reviews the Novel Compass scorecard at Triple-M virtual meetings to assess organizational performance and capabilities, monitor market and financial performance, and monitor progress on strategic action plans. The Triple-M review is used to make adjustments to resource deployment and action plans, as needed, to address gaps in performance and to ensure that the organization responds to new business and innovation opportunities.

4.1b(2-3) On a monthly basis, the SLT uses (1) its evaluation of Novel Compass scorecard results and (2) the analyses provided by the Marketing and Public Relations, Research and Development, and Product Engineering and Design Teams to determine whether opportunities for innovation and/or improvement exist for Novel Connect. If a new or changed direction is required—either for a key process or for a strategic action plan—the SLT will determine the scope of the change, estimate a timeline and resources, and set preliminary

Figure 4.1-1 Novel Compass Scorecard: Key Organizational Performance Measures (Continues on page 21–22)

What Is Measured	Metric or Result	Goal	Comp- arator	Strategic Objective (Figure 2.1-2)	Strategic Advantage (P.2b)	
Profit vs. sales	Attainment of monthly PBT profit target	3–4%		Profit	Business model innovation	
Profit vs. capital	Attainment of profit vs. capital target	70/30		Profit	Product/feature design innovation, business model innovation	
On-time delivery	Internal stock availability	100%		Customer satisfaction and market position; innovation, agility, and rapid response	Product/feature design innovation, business model innovation, supplier partnerships/lowered costs	
Order efficiency	Assembly process effectiveness, packaging process effectiveness	100%		Customer satisfaction and market position	Product/feature design innovation, business model innovation, supplier partnerships/lowered costs	
On-time commit- ment for new prod- ucts/features	Lead time that meets customer's timeline	100%	95%	Customer satisfaction and market position; innovation, agility, and rapid response	Product/feature design innovation, business model innovation, supplier partnerships/lowered costs	
Repeat business	Percentage of repeat customers	98%	84%	Customer satisfaction and market position	Product/feature design innovation, business model innovation, supplier partnerships/lowered costs	
Product reliability	Damage claims ratio	0.8%	1%	Customer satisfaction and market position	Product/feature design innovation	
Customers' satisfaction with carrier	Dropped calls/millions	<3.0 per million		Customer satisfaction and market position	Product/feature design innovation, supplier partnerships/lowered costs	
Value stream effectiveness	Index of OTD, fill rate, defect rate, increase in share of supplier business, suppliers' sustained PE ratio and EBIT, strategic alignment	350	350	Innovation, agility, and rapid response; value creation	Supplier partnerships/lowered costs	
Customer satisfaction	Call center "problem" call ratio (problems vs. inquiries)	0.275	0.34	Customer satisfaction and market position; innovation, agility, and rapid response	Product/feature design innovation, supplier partnerships/lowered costs	
Customer satisfaction	Survey results overall, segmented (scale 1–5)	4.5	4.25	Customer satisfaction and market position; innovation, agility, and rapid response	Product/feature design innovation, business model innovation, supplier partnerships/lowered costs	
Niche market share	Revenue dollars from leading niche markets	$2,250 million		Innovation, agility, and rapid response	Product/feature design innovation, business model innovation	
Niche market diversification	Niche market share	$3.5 billion		Innovation, agility, and rapid response	Product/feature design innovation, business model innovation	
Customer satisfaction	Permission to contact customers	80%		Customer satisfaction and market position; innovation, agility, and rapid response	Product/feature design innovation	
Value creation score	Percentage of company revenue from new products released within the past two years	55%	50%	Value creation	Product/feature design innovation, business model innovation, supplier partnerships/lowered costs	

Strategic Challenge (P.2b)	Aligned Key Process Area (Figure 6.1-2)	Related Values (Figure P.1-1)	Figure in Category 7
Logistics (supply chain management), volatility in niche markets, volatility of overseas environment	Market analysis and listening	Agility, valuing employees/partners, innovation, sustainability	7.3-2
Availability of highly skilled workforce, logistics (supply chain management), volatility in niche markets, volatility of overseas environment	All	Agility, valuing employees/partners, innovation, sustainability	7.3-5
Communication (decentralized, virtual), logistics (supply chain management), volatility of overseas environment	Carrier and supplier relationships	Agility	7.5-6
Communication (decentralized, virtual), logistics (supply chain management), volatility of overseas environment	Final packaging	Agility	7.5-10, 7.5-11
Communication (decentralized, virtual), volatility in niche markets, protection of intellectual property, volatility of overseas environment	Product and feature development (improve lead time to customers by 20%)	Agility, innovation, sustainability	7.2-2
Availability of highly skilled workforce, communication (decentralized, virtual), logistics (supply chain management), volatility in niche markets, protection of intellectual property, volatility of overseas environment	Market analysis and listening	Agility, valuing employees/partners, innovation, sustainability	7.2-9
Communication (decentralized, virtual), volatility in niche markets, volatility of overseas environment	Product and feature development, final packaging	Agility, valuing employees/partners, innovation, sustainability	7.5-12
Volatility of overseas environment	Carrier and supplier relationships	Valuing employees/partners, innovation, sustainability	7.1-3, 7.5-1
Communication (decentralized, virtual), logistics (supply chain management), volatility of overseas environment	Carrier and supplier relationships	Innovation, sustainability	7.5-6
Communication (decentralized, virtual), volatility in niche markets, volatility of overseas environment	Customer service call center	Agility, innovation, sustainability	7.2-5
Availability of highly skilled workforce, communication (decentralized, virtual), logistics (supply chain management), volatility in niche markets, volatility of overseas environment	All	Agility, valuing employees/partners, innovation, sustainability	7.2-1
Volatility in niche markets	Market analysis and listening	Agility, valuing employees/partners, innovation	7.3-7
Communication (decentralized, virtual), volatility in niche markets, protection of intellectual property, volatility of overseas environment	Market analysis and listening	Agility, valuing employees/partners, innovation	7.3-7
Communication (decentralized, virtual), volatility in niche markets, volatility of overseas environment	All value creation processes	Agility, valuing employees/partners, innovation	7.2-10
Logistics (supply chain management), volatility in niche markets, protection of intellectual property, volatility of overseas environment	All value creation processes	Agility, valuing employees/partners, innovation, sustainability	7.5-4

Figure 4.1-1 Novell Compass Scorecard: Key Organizational Performance Measures (Continued)

What Is Measured	Metric or Result	Goal	Comparator	Strategic Objective (Figure 2.1-2)	Strategic Advantage (P.2b)	
Employee retention	Voluntary turnover rate	1%	1.5%	Workforce satisfaction	Product/feature design innovation, business model innovation	
Percentage of positions filled by internal candidates	Percent filled from within or employee referrals	25%		Workforce satisfaction	Product/feature design innovation, business model innovation	
Workforce satisfaction/ engagement	14 dimensions of employee satisfaction and engagement	>90th percentile	Benchmarked against Trot database	Workforce satisfaction	Product/feature design innovation, business model innovation	
Employee proficiency	Employee advanced proficiency training	>75%		Workforce satisfaction	Product/feature design innovation	
Safety	Total recordable rate	3% man., 3% office	National industry average	Workforce satisfaction	Product/feature design innovation, business model innovation	
Safety	Days away/restricted time rate	2% man., 1.75% office	National industry average	Workforce engagement	Business model innovation	
Environmental impact	Go-Green/Grow-Green increase in waste recycled	20%		Workforce satisfaction, customer satisfaction, and market position	Product/feature design innovation, supplier partnerships/lowered costs	

performance goals. The senior leaders responsible for the affected processes or projects will then cascade these preliminary plans to their areas of responsibility, and they will facilitate further planning at the process/project level to determine final timelines and projected performance. Timelines and projected performance information are then brought back to the SLT at the next Triple-M meeting, and adjustments to Novel Compass performance measures and goals are made by the SLT. The SLT then notifies the IT/IC Team of any modifications that must be made within MAP to enable a revision to the Novel Compass scorecard. Leaders meet with their teams on a weekly basis (see 1.1), and through these meetings, they sustain a focus on any new or changed direction and performance goals.

A similar process is used to manage supplier and partner performance. The COO works with the Distribution and Supply Chain Management Teams, and the CIO works with the Channel/ Retail Sales and Customer Service Teams to communicate expected changes to suppliers and partners and to make any necessary alterations in supplier and/or partner performance management.

4.2 Management of Information, Information Technology, and Knowledge

4.2a(1) All data and information generated from key work processes are available for employees at any time via computer. Access to MAP information is controlled by the IT/IC Team; an employee is given access privileges to MAP by the approval of a member of the SLT. Pod leaders and process leaders who are responsible for relationships with suppliers, partners, and customers will convey MAP summary performance results to these

stakeholders, as appropriate, after the information has been scrubbed of sensitive, proprietary, or confidential information.

4.2a(2) Novel Connect's IT/IC Team manages the internal MAP system, PLC software, and interfaces at the manufacturing facility in Rochester, New York. This team works directly with any key process or project leader to develop and deploy Novel Compass scorecards. The IT/IC Team conducts in-person and/or Web-based training sessions for all MAP users, and it determines the effectiveness of its training by analyzing call frequencies to the internal IT/IC operations help desk, which is staffed during production hours and whenever requested by the Maintenance Team. The IT/IC Team also works closely with the Process Engineering Team to monitor hardware and software performance on the plant floor, to program PLCs, and to manage upgrades. The reliability of plant-floor manufacturing data is determined at intervals that vary by production process and subprocess cycles (from seconds, to hours, to days) by comparing data transmitted electronically from PLCs and translated to MAP, with manual data from quality control (QC) and calibration checks.

The IT/IC Team also is responsible for maintaining, linking, and improving other Novel Connect databases located within MAP, such as the PIP Database and its Improvement Reports, the Customer Complaint Database, and the Knowledge Management Database. Other areas of responsibility include (1) management of the intranet, which contains an internal Web page for each key process that can be linked to the Novel Compass scorecard, and (2) support of the technologies used for the monthly ethics videos.

Strategic Challenge (P.2b)	Aligned Key Process Areas (Figure 6.1-2)	Related Values (Figure P.1-1)	Figure in Category 7
Availability of highly skilled workforce, communication (decentralized, virtual)	All	Agility, valuing, employees/partners, innovation, sustainability	7.4-4
Availability of highly skilled workforce, communication (decentralized, virtual)	Human resources (workforce development)	Agility, valuing employees/partners, innovation, sustainability	7.4-6
Availability of highly skilled workforce, communication (decentralized, virtual)	All	Agility, valuing employees/partners, innovation, sustainability	7.4-2
Availability of highly skilled workforce	All	Agility, valuing employees/partners	7.4-5
Availability of highly skilled workforce, communication (decentralized, virtual)	All	Valuing employees/partners,sustainability	7.4-8
Availability of highly skilled workforce, communication	All	Valuing employees/partners, sustainability	7.4-7
Logistics (supply chain management), volatility in niche markets	Product and feature development, final packaging, maintenance, carrier and supplier relationships (manufacturing, retailers, logistics)	Valuing employees/partners,sustainability	7.6-4

Because of its size and dispersed workforce, Novel Connect contracts with Hubs-R-Us, Inc. (HRU) to (1) provide a high-bandwidth, high-availability, virtual private network intranet and (2) support integrated microcomputer- and PC-based software and hardware for productivity, video- and teleconferencing, servers, and system backups at all 11 Novel Connect pod sites and to the employees who telecommute to these pods. Partnering with HRU prevents Novel Connect from having to invest capital in costly networking facilities and provides competencies that Novel Connect does not have. HRU operates a toll-free help desk and has a network of hardware and software specialists with an inventory of backup equipment in each of Novel Connect's pod cities.

Security is addressed by HRU in two ways. First, all network servers are housed off site in temperature-controlled server hubs (special warehouses) that are access-controlled. Second, all mobile communication devices (e.g., cell phones) and portable PCs used by Novel Connect's employees use digital power-on passwords; in addition, log-on passwords are used for any application that enables Internet or server access. To ensure that they are random, HRU assigns changed passwords monthly to the user; HRU specialists can "shadow" Novel Connect's devices and randomly check compliance with information protection protocols.

HRU conducts semiannual virtual user surveys within the Novel Connect organization to assess hardware and software "user-friendliness," and it uses this feedback to improve user interfaces, user training programs, and the accessibility and utility of the HRU help desk.

4.2a(3) Continued availability of hardware and software in the event of problems and emergencies is managed in several ways. HRU provides a high-bandwidth, high-availability broadband data network. In Novel Connect's dispersed organization, digital design files replace face-to-face concurrent engineering and promote collaboration needed to implement an effective, distributed development process. To provide flexibility (considering that many engineers prefer to work late at night), the network and associated servers have at least 99.99 percent availability, which is achieved through redundancy in data transmission paths, servers, and disk raid arrays. HRU provides daily backups for all data and files on every device that is connected to the servers. The server data are backed up twice weekly to redundant systems. In the manufacturing environment, the PLC programs are backed up daily by the IT/IC Team, and the backup files are stored off site. Redundant hardware is stored at Novel Connect's technology center in Ithaca and is readily available to employees and to the plant in Rochester. Redundant hardware also is accessible at HRU support nodes in all of Novel Connect's pod cities and is available to any pod site within three hours. Backup hardware is available within one or two days to all other dispersed employees.

4.2a(4) In addition to its virtual user surveys, HRU participates in semiannual "improvement" meetings with key Novel Connect leaders (including the CWO and pod team leaders) and certain work process teams to evaluate and improve information management. HRU uses this feedback to make recommendations to Novel Connect regarding future hardware and software purchases and upgrades. These recommendations are used as inputs into the SPP.

4.2b(1) Novel Connect uses several methods to manage the following properties of its organizational data, information, and knowledge:

- **Accuracy:** Manufacturing data generated at the plant floor are automatically relayed to MAP so that real-time operations information can be seen from any PC connected to the server. The accuracy of this information is ensured using manual QC data and calibration checks during the daily manufacturing cycle. The accuracy of other MAP data is ensured by those doing the data entry; these same individuals are Novel Compass scorecard users and review the information at frequencies appropriate to their work-process cycle times. As a "lean" organization, materials arrive close to the time they are needed, so the accuracy of supply chain data is determined by an ongoing sampling process called "cycle counting," which ensures that capital is not unnecessarily tied up in excess inventory.

- **Integrity and reliability:** See 4.2a(2) above.

- **Timeliness:** Plant floor data and information are provided in real time. For all other work processes, data entry is done at a frequency appropriate to the process cycle time (e.g., real-time for call center data, daily for accounts receivable or payable accounting, daily for safety results). MAP can be programmed, according to the user's needs, to provide send-reports and "alerts" via e-mail or cell phone (e.g., utilizing features such as pagers, automatic text messages, and alarms) when performance results are off-track.

- **Security and confidentiality:** HRU maintains and monitors Novel Connect's information systems security, including Web site firewall, antivirus practices, and Internet protocols. Conformance is monitored through random compliance audits and "shadowing" users; results are reported weekly to the Chief Financial/Administrative Officer (CF/AO) and the IT/IC Team.

4.2b(2) Novel Connect uses a Knowledge Management Database that generates access-limited personal development plans (PMaps). PMaps are used to help individual employees manage their learning. By building links between the Knowledge Management Database and the organization's MAP system, the IT/IC Team can generate reports for the CWO that indicate the knowledge capabilities of the overall workforce. This information is used as an input to the SPP.

Workforce knowledge also is collected and transferred throughout the organization using the following methods:

- Key process and project Novel Compass scorecards that are accessible to all employees in that process or project scope

- "Novel Notes" daily e-mails that announce and recognize individual and team performance

- Weekly team meetings with pod leaders

- Improvement Reports that are generated from the PIP Database and are available on Novel Connect's intranet

- Key process tabs on the Novel Connect intranet that may be linked to Novel Compass scorecards

- *Novel Pathways*, a weekly intranet newsletter that communicates and recognizes teams for innovations and improvements

The IT/IC Team tracks the number of "hits" on the intranet and tracks MAP log-on times and access durations to help evaluate the effectiveness of these organizational learning methods.

Novel Connect's distributed product development approach comprises people, work process procedures, and tools and technology. The procedures and tool sets are a major repository of process learning. The digital files produced by these tools allow virtual communications within the Product Engineering and Design Team, and the files produced by these tools are shared to communicate the design to suppliers/partners.

Knowledge is transferred to suppliers, partners, and customers as described in 4.1b. In addition, Novel Connect integrates some technologies that it owns with the technologies of its key partners. For example, the digital signal-processing and random access memory (RAM)/flash memory system (supplier), flat-panel displays (supplier), battery technology (supplier), and radio airlink protocol (carrier partner) are technologies that are critical to meeting cell phone customer requirements but are sourced from other companies. With confidentiality agreements in use by Novel Connect and its key partners to protect sensitive information, cross-sharing of associated technology roadmaps ensures knowledge transfer to these key partners.

5: Workforce Focus

5.1 Workforce Engagement

5.1a(1) Every year, Novel Connect conducts a survey of all employees to determine workforce engagement and satisfaction using the Trot Engage 14 survey. To analyze these data and determine key factors that affect workforce engagement and satisfaction, Novel Connect has a cross-functional Workforce Development Team (reporting to the CWO) with representation from each job classification within the organization. This team meets virtually to analyze the data to review existing (and identify

new) key factors of workforce satisfaction and engagement. As part of the analysis received from Trot, a statistical check is done to make sure factors are consistent for varied demographics within a job classification (e.g., gender, ethnicity, age, length of employment, geographic location, work setting [e.g., home-based virtual office versus traditional office or manufacturing plant]). If the team were to identify any new factors, it would make recommendations to the SLT on how these factors should be addressed. Since the survey was deployed two years ago, no new factors have yet been identified.

5.1a(2) During hiring, Novel Connect emphasizes the identification of appropriate candidates who will flourish in an organizational

culture that promotes flexible work schedules and work/home balance and that has a predominately virtual workforce. An instrument was developed, in conjunction with the University College of Rochester, to screen candidates for team and communication skills, initiative, innovation, and creativity. This instrument also screens for personality type, which is not used in the hiring decision but is used later to aid supervisors and team leaders in maintaining a balance of diverse personalities on their teams.

To enable effective communication and facilitate employees' sharing of skills, lessons learned, and best practices, employees have access to the Knowledge Management Database, which links to the intranet. This provides an effective method for two-way information flow among employees on teams and their supervisors and other senior leaders.

Beyond the use of the intranet, supervisors have weekly conference calls (or face-to-face meetings, if they are located in the same city) with work units (or teams) and with each employee. Novel Connect leaders also make extensive use of e-mail and text messaging for ongoing contact with employees and for encouraging and recognizing innovation. Performance goals, progress, and opportunities for improvement, as well as the organization's core values and strategic objectives, are standing topics at all meetings.

5.1a(3) Novel Connect uses the company's intranet to encourage and support team and individual accomplishments and to celebrate success. Supervisors and other leaders also share and celebrate employees' accomplishments during team and individual meetings and group conference calls.

PMaps, used to set individual performance goals and establish professional development plans, are built around the company's core values and clearly link to companywide goals and initiatives. Supervisors and employees determine and mutually set goals annually for performance expectations and identify what actions/behaviors and results are needed to exceed those expectations. These expectations include the 10 percent time-on-innovative-ideas rule (see 1.1a[3]). As part of developing the annual performance plan, each employee, in agreement with the supervisor, develops goals along with a point system to assess the degree of difficulty for the goals. In this way, employees are encouraged to develop more aggressive goals but are not penalized if their goals are not fully achieved. Regular meetings with supervisors are conducted to review and adjust plans and goals to accommodate the changing needs of the business. An overview of the performance management system is shown in Figure 5.1-1.

For those employees participating on teams beyond their usual work team (such as an ad-hoc process improvement team or a customer satisfaction team), a similar point system is used in relation to the team goals. The points are a multiplier for stock options that the team is assigned to disperse among the team members based on their consensus. The number of stock options is set at the beginning of each year by the SLT for distribution to teams and individuals for their contributions. Teams also can submit applications for companywide teamwork awards based on the company's core values and strategic objectives. Teams can win a trip to participate in national teamwork competitions.

5.1b(1) At Novel Connect, the overall nature of the business and culture supports many opportunities for learning, training, and education. A section within the PMaps includes the identification of developmental needs, which are aggregated to determine the common needs to be addressed across the organization. Two examples of training given to all employees are "Sales 101" and Novel Connect's CCHP.

Resources also are identified to address individual needs, and each employee is assigned a mentor when starting with the organization. After their first year, employees have the option to select their own mentor (based on supervisor approval to ensure that no one mentor is being overloaded) who might be more aligned with their career goals. Employees work with their mentors to ensure that they have the right developmental plans (PMaps) to achieve not only company goals but also their own personal career goals. Since supervisors know what training employees are receiving, they note observations of the employees' behavior before and after the training to determine the level of effectiveness of the training. The supervisor then provides feedback to the employee either to correctly shape or positively reinforce the performed behavior/skill. During interviews with employees regarding their PMaps, supervisors conduct a final review and establish the level of deployment of behaviors, skills, and knowledge to be gained through learning, training, and educational opportunities.

The PMaps are modified each year to ensure that development plans tie back to Novel Connect's core competencies (listed in Figure 6.1-1), strategic challenges, technological changes and industry innovation, and long- and short-term company goals established in the Strategic Planning Process (see Figure 2.1-2).

The company's intranet includes a Knowledge Management Database (part of MAP) that captures work-related experiences from employees to help transfer knowledge from departing to newer employees (see 4.2b[2]).

5.1b(2) Novel Connect does not believe in creating separate systems for different levels of employees within the organization. The same PMap system used for employees also is used for the organization's leaders. SLT PMaps also address leadership development, mentoring, and ethical practices, but the process is the same.

5.1b(3) Multiple methods are used to measure the effectiveness of workforce and leader development and learning systems. A comprehensive review of all the performance metrics presented in Category 7 helps Novel Connect understand the overall effectiveness of its development and learning systems. Whenever there are negative trends or patterns in the data, including for development and learning systems, the responsible team evaluates the data and determines a root cause. Likewise, when a best practice is identified or a team or individual is recognized, key success factors are determined to emulate the success in other parts of the organization. Novel Connect also uses attendee feedback sheets with each training/development event to measure satisfaction.

5.1b(4) Mentors and succession plans for all key positions in the organization are used to effectively manage career progression.

Figure 5.1-1 Performance Management System
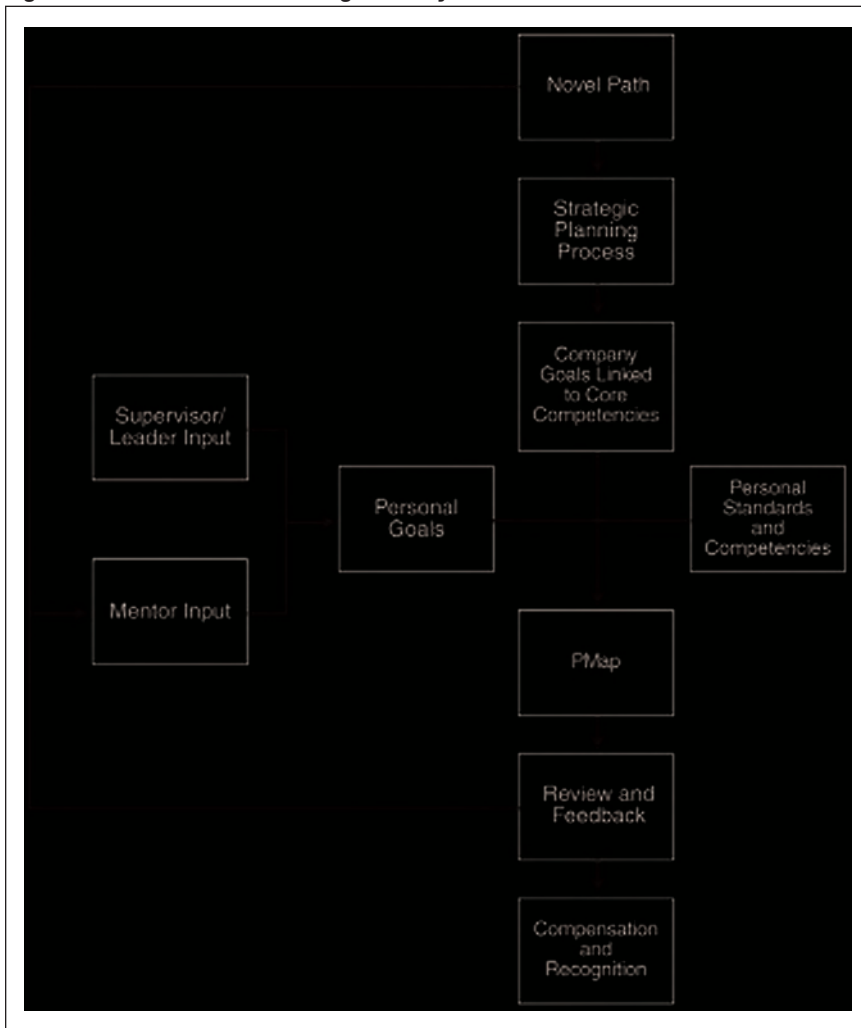
The succession planning process is itself based on the Novel Path (Figure 1.1-1). An annual review of key positions is facilitated by the CWO. Novel Connect requires that all leadership positions have three potential successors identified. An assessment center is used to identify high-potential employees (for key individual contributor positions and all leadership positions), with the assessment results used as one element in leader selection. This process assesses individuals' values against Novel Connect's core values by testing candidates in research-based activities that demonstrate the Novel Path in action. The assessment center was developed in partnership with the University College of Rochester. High-potentials (employees expressing an interest in formal leadership roles and considered to have the potential to be effective) are coached and mentored in specific projects to allow them to practice, experiment, and develop strength in each value. All employees who have formal leader aspirations must participate in the assessment center and develop personal development plans based on assessment center results, performance management system results, and 360-degree feedback. Leadership development plans have a specific focus on core-values-based projects (e.g., taking a leadership role in nonprofit work serving Novel Connect's key communities, as referenced in 1.2c).

As part of the annual performance review process, the employee mentor and/or direct supervisor propose developmental goals for possible future assignments that would complement future career growth. The candidate and mentor are notified of a proposed succession plan opportunity and evaluate it to determine if the opportunity fits with the employee's overall development goals. If the position would meet the employee's developmental needs, actions are included in the employee's PMap to help the employee grow to meet the position's requirements.

5.1c(1) Novel Connect uses the Trot Engage 14 employee satisfaction survey to measure workforce engagement; results for all 14 dimensions are shown in Figure 7.4-2. Other measures used as indicators of workforce engagement include

- Percentage of employees participating on cross-functional teams (Figure 7.4-3)
- Voluntary turnover rate (Figure 7.4-4)
- Percentage of employees completing advanced proficiency training (Figure 7.4-5)
- Percentage of positions filled internally or through employee referrals (Figure 7.4-6)
- Safety at the manufacturing facility (Figures 7.4-7 and 7.4-8)

5.1c(2) The cross-functional team (see 6.2b) that is responsible for reviewing the results from the workforce engagement survey receives additional statistical analysis from the Trot organization to determine if there are any statistically significant correlations between the survey results and key business results (reported in Category 7). This analysis and recommendations from the team are inputs for the Strategic Planning Process (Figure 2.1-1).

5.2 Workforce Environment

5.2a(1) To assess workforce capability and capacity needs, Novel Connect aggregates data gleaned from the annual employee PMaps. The Knowledge Management Database and MAP system are linked, allowing the IT/IC Team to generate reports for the CWO that indicate the knowledge capabilities of the overall workforce. This analysis allows Novel Connect to assess its workforce capability, capacity, skills, and competencies. Staffing levels—including target capacity within each position and within each pod—are determined from the Strategic Plan, and leaders use Novel Compass scorecards to make decisions about production scheduling, staffing, and resource management (see 4.1a[1]).

5.2a(2) Since Novel Connect stresses the virtual office concept, the recruiting process takes advantage of that fact. Much recruiting takes place through the Internet on sites such as Animal.com, and Novel Connect also uses local workforce boards and educational institutions in pod communities. Novel Connect uses its own employees as one of its strongest recruitment tools. With the high level of employee satisfaction and engagement enjoyed at Novel Connect, employees actively recruit friends and colleagues

to join the company. Novel Connect began offering referral bonuses in 2005: employees referring a new hire receive $500 spot bonuses upon the new employee's six-month anniversary. Figure 7.4-6 shows how this program has increased the percentage of jobs filled through employee referrals since its inception. The recruiting process is shown in Figure 5.2-1.

Novel Connect also uses national and local rehabilitation centers to identify potential employees with disabilities. Novel Connect believes that people with physical disabilities make up a large and underutilized pool of potential employees who may fit in well with the company's largely virtual workforce and core values.

The use of mentors for each new hire has proven to be a valuable tool in increasing employee retention, as shown by the Voluntary Turnover Rate (Figure 7.4-4). Each new employee is assigned a mentor, who works with the new employee to ensure a smooth transition into the company. Mentors also work with employees to identify career paths and development plans (see 5.1).

The Workforce Development Team regularly reviews employee demographics across the company and within job functions/pods to ensure that a diverse employee population is maintained. If any trends or gaps appear in the analysis, a PIP (Process Improvement Process) team is formed to first investigate and then to develop and deploy plans as appropriate. Diversity also is maintained within teams/pods through Novel Connect's use of personality (e.g., communication styles) profiles.

5.2a(3) Novel Connect heavily relies on and organizes its work around teams and pods. The matrix management and relatively flat, team-based structure capitalize on the company's core competencies. Teams are used for product development, product support, and cross-functional issues such as compensation, employee satisfaction, customer satisfaction, strategic initiatives, and improvement efforts. Depending on the team's charter and the current diversity profile of the team, potential team members may be directly solicited or nominated by supervisors (as part of employee development), or employees may submit an application to join a team. Each team has a team leader in a company position appropriate to the mission of the team. Teams can be formed by the company's leadership or by front-line employees, which allows for greater flexibility with changing business needs.

5.2a(4) Novel Connect leaders believe in maintaining a very open environment with employees. Data about market trends, product performance, and overall company performance are openly shared with all employees through the company intranet, which allows employees to be more proactive in decision making and allows reallocation of resources if downturns and environmental changes dictate. However, no layoffs have occurred in Novel Connect's history, despite the economic impact of the national 9/11 tragedy and the 2001 recession. Novel Connect also focuses on developing diverse markets to ensure that a negative trend in any one market will not overly impact the organization. For example, when senior leaders in 2003 decided to delay adding a specific feature to one product, a pod in northern California that was working on this feature then shifted to work on a new product being developed by a pod on the East Coast. Novel Connect's

Figure 5.2-1 Novel Connect Recruiting Process
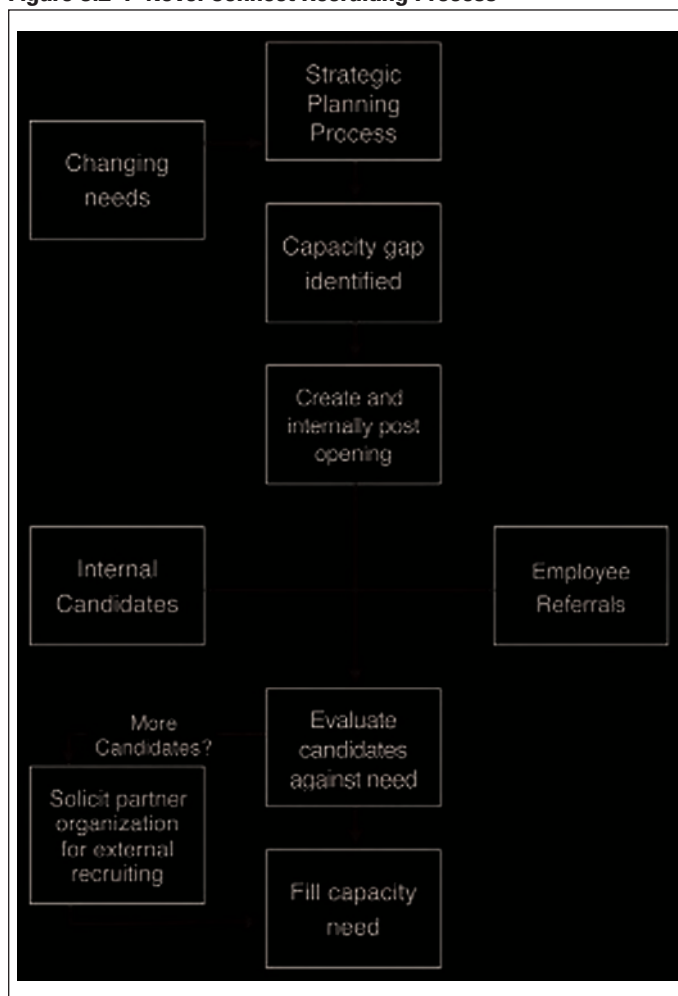
flexibility and competency training allowed for this quick and smooth transition so that no jobs were lost.

5.2b(1) Since about half of Novel Connect's employees work in an office environment (including working from home), ergonomics are important health and safety concerns. To address this concern, Novel Connect contracts with a national firm to conduct assessments of the workplace environment for all employees; this is especially critical given that Novel Connect aggressively recruits employees with disabilities. Employees are each allotted a $2,500 office environment fund to purchase equipment and/or modify their working environment to ensure that the highest ergonomic level (and productivity) can be obtained; in addition, there is a companywide fund available if an employee has special needs that go beyond the $2,500 allotment.

For health and safety concerns in the manufacturing facility, Novel Connect has a Rochester-based safety team that meets monthly (at a minimum) to conduct safety audits, review results, and develop/deploy appropriate actions. Companywide safety and health issues are addressed through a cross-functional national safety team that reviews input from ergonomic data received from a subcontractor, as well as reviews company-specific data that are collected on various indicators (e.g., injuries related to repetitive motions). This team then makes recommendations to the SLT for actions, equipment, and health- and safety-related training. Besides

office ergonomics, some actions and training include safety in the home, health tips, annual flu shots, driving safety tips, and security (many Novel Connect employees have a ***Novel Secure 1*** device). Figure 5.2-2 shows Novel Connect's performance measures and improvement goals for workplace health, safety, and security.

Novel Connect also supports prevention with numerous voluntary employee wellness programs designed to encourage and promote employees' health. Examples include company-provided or company-reimbursed flu shots, health club membership dues, smoking cessation programs, and weight-control programs.

5.2b(2) A cafeteria-style workforce benefits plan was developed by the Benefits Team to allow the greatest flexibility for employees. On a regular basis, this team meets and reviews the benefits offered and makes annual adjustments as needed. Multiple options are available to employees to create the most effective plans for their needs. Employees select from varying options in each of the following areas: medical care, dental/vision care, flexible spending accounts, survivor benefits, retirement

Figure 5.2-2 Workplace Health, Safety, and Security: Performance Measures and Goals

Work Environment	Performance Measure	Improvement Goals	Figure
Office	Total Recordable Rate (TRR)	Industry leader in office environment by 2010	7.4-8
Office	Days Away/Restricted Time Rate (DART)	Industry leader in office environment by 2010	7.4-7
Office	Repetitive Motion Injuries	0 Injuries by 2010	7.4-9
Manufacturing	TRR	Industry leader in manufacturing environment by 2010	7.4-8
Manufacturing	DART	Industry leader in manufacturing environment by 2010	7.4-7
All	Participation in Company-Sponsored Employee Wellness Programs	50% participation by end of 2008	7.4-10

savings, and disability insurance. One of the biggest benefits available to many Novel Connect employees is the ability to work for the company and live almost anywhere in the United States due to the virtual workplace structure.

6: Process Management

6.1 Work Systems Design

6.1a(1) Novel Connect defined its initial set of core competencies as part of a two-day organizational alignment workshop that the SLT conducted in 2000. The core competencies were reviewed again in 2002, and since that time, these competencies have been reviewed and modified as needed annually as part of the SPP.

Figure 6.1-1 defines Novel Connect's current core competencies, along with the approaches that are used to determine these competencies. In general, Novel Connect uses information gathered through its various VOC processes (see 3.1a[2]) to assess the degree to which performance in each core competency area compares to that of the competition and to identify ways each core competency can be further strengthened.

Multiple customer feedback inputs, along with the results of data analyses, are integrated through the use of a quality function deployment (QFD) matrix to determine and validate these competencies as part of the SPP. Use of the QFD helps clarify the strengths of each competency relative to customer feedback and process performance trends. If a strong correlation exists between internal process performance, customer satisfaction results, and a current competency, the company will continue to keep that process "in house" instead of outsourcing it (see

6.1b[1]). This approach helps Novel Connect ensure that its strategic objectives and goals complement each core competency.

6.1a(2) Novel Connect aligns its key work processes around its key value stream processes, as shown in Figure 6.1-2. While simple in its design, the resultant Process Synergy Map (Figure 6.1-3) also illustrates how these two key process types exist to support the value stream between key suppliers and key external customers. Novel Connect strives to be much more than a cell phone manufacturer. Instead, Novel Connect's intent is to provide its customers with cell phone features, products, and functionality that far exceed those of its competition, while also addressing customer needs. Compared to other cell phone manufacturers, new product feature development and carrier relationship quality play a much greater role for Novel Connect in providing higher levels of customer value. These help Novel Connect accomplish its stated purpose as it "facilitates a world on the move."

6.1b(1) Novel Connect relies heavily on its process excellence philosophy and methodology (DMAI, see Figure 6.2-1) to help ensure that the key requirements of both its internal and external customers are met or exceeded on a consistent basis. Figure 6.1-2 defines these processes, along with the linkages that exist between a process and the key customer requirements and success metrics of the organization.

Several years ago, the SLT determined that Novel Connect did not have a core competency relative to component manufacturing as indicated by its inconsistent performance in this area, so the

Figure 6.1-1 Novel Connect Core Competency Matrix

Core Competency	How Determined?	Link to Mission/Vision and Competitive Environment
Communication	• Focus groups • Satisfaction surveys • Sales trend analysis	Enhancing communication channels among employees, customers, and suppliers/partners helps Novel Connect achieve its profit goals.
Agility and rapid response	• Focus groups • Internal and external online satisfaction surveys • Sales trend analysis	Information to and from partners/suppliers, the carrier, external customers, and internal customers is key to meeting and exceeding performance expectations.
Innovative niche product/ feature design	• Market research • Satisfaction surveys • Call center feedback • Employee customers	Novel Connect strives to outperform its competition in terms of meeting current and anticipated customer product and feature needs.
Technology development and sourcing	• Market research • Focus groups • Satisfaction surveys • Call center feedback	New hardware and software drive process excellence within Novel Connect and provide added cell phone benefits to its external customers.

company subsequently chose to contract with external suppliers for the production of cell phone housings, key pads, internal circuit boards, and product packaging materials. These components are now manufactured at sites in China and India.

6.1b(2) Key work process requirements (see Figure 6.1-2) are determined using a common approach, regardless of the function supported. All processes have been defined using flow diagrams, and all process owners are required to update their process flow diagrams on an annual basis or whenever a significant process improvement is made. As part of the annual update, process owners are expected to solicit feedback from their internal and external customers, including information on how well the process is meeting current needs. In addition, process owners are expected to compare the results from their individual surveys with those collected through the Novel Connect VOC approaches (see Figure 3.1-2).

Once an aggregate list of customer requirements has been identified, along with current subjective feedback as to how well those requirements are being met, each process owner compares these findings and those provided through the different customer satisfaction surveys. Process modifications, if needed, are then built into the Department Improvement Plan for the coming year. For example, in the 2004 planning cycle, the Internet Order Fulfillment process owner identified an unmet customer need relative

to the clarity of labels on shipments; changes were subsequently identified and implemented during 2005 to make the package label more easily readable. Similarly, in 2007, the warehouse and sales managers identified the need for a more formal returns process and have begun tracking causes for product returns in an effort to further reduce return rates and customer dissatisfaction.

In-process metrics are captured in the areas of safety, quality, staffing, cost, and time for all process areas (these metrics are available on site). In addition, revenue and growth metrics also are tracked in sales and marketing. Examples of in-process metrics that are captured include assembly and packaging process cycle times (see Figures 7.5-10 and 7.5-11), rework percentages (see Figures 7.5-10 and 7.5-11), equipment uptime rates (see Figure 7.5-14), and component availability percentages (data available on site). All process owners, no matter their role in the organization, are expected to track and trend process cycle times and error rates for those processes for which they are responsible. For example, all meeting leaders (a typical role of pod leaders) regularly trend meeting effectiveness scores and meeting defect rates for every formal meeting held.

In 2006, the ability to obtain real-time trends and Pareto chart breakdowns from MAP was added. This capability allows process owners and pod team members to access the MAP system from their personal digital assistants (PDAs) or work stations after providing the necessary password (see 4.2a[2]). Trend observation notes can be made by that person and uploaded to the MAP system so that they can be reviewed by others who may benefit from the information. Recent trend observation notes are posted on Novel Compass and reviewed weekly at pod meetings. They also may be reviewed at regular SLT meetings.

6.1b(3) Novel Connect uses the PFPD process (Figure 6.1-4) to ensure that new products and services are created to better satisfy the needs of its external customers and to ensure that its existing work processes are executed in a daily manner that meets the needs of its employees and the organization as a whole. The company recognized early on that its ability to provide innovative niche product and feature designs for cell phones represented a competitive advantage. In turn, Novel Connect chose to focus on identifying, designing, and producing proprietary products and features that allow it to satisfy unique and ever-changing market needs.

The cross-functional PFPD process involves customers, sales and marketing staff, its carrier and key outsource manufacturing partners, and Research and Development and Product Engineering and Design Teams throughout the design and development effort. Qualitative and quantitative VOC processes (see 3.1a[2]) are used to identify possible product, feature, or process options. These options are then subjected to feasibility analysis, using input from stakeholders throughout the value stream. If a new product, feature, or design appears to be feasible, samples are developed and tested in the marketplace. Recently, benchmarking efforts have helped the Product Engineering and Design Team to identify the need to streamline this approach by making it a more concurrent development design to further reduce its cycle time and improve its effectiveness.

Figure 6.1-3 Novel Connect Process Synergy Map
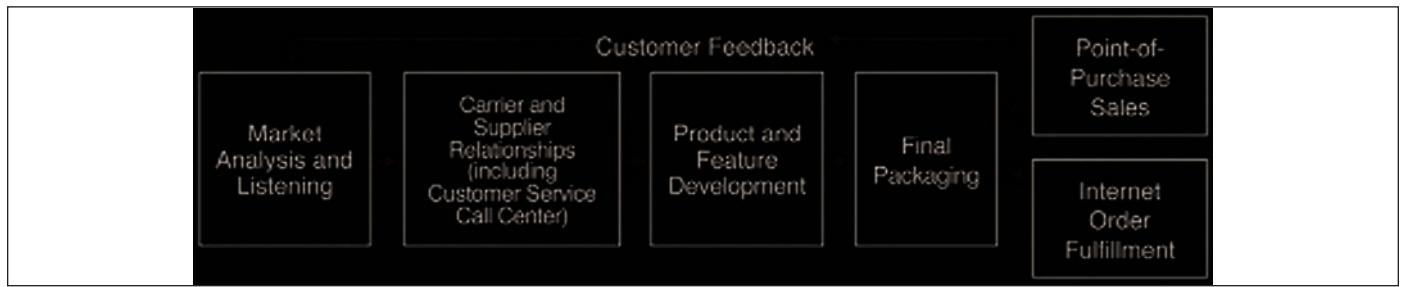
Challenge tests are conducted by involving a sample group of internal or external customers to gauge the degree to which the new product, feature, or process design meets the various expectations of the given customer group, as well as meets the requirements that have been identified. Once the new product, feature, or process is approved, it is formally introduced or put into service.

Because the PFPD process both supports Novel Connect's core competency of innovative niche product/feature design and plays a central role in the company's sustainability over time, the process is reviewed formally as part of the annual SPP effort and as part of each product, feature, or process challenge test. At the end of each challenge test, the PFPD process is reviewed by first asking each participant to individually assess his or her current level of satisfaction with both the design of the PFPD process itself (process steps and sequencing) and with the degree of stakeholder involvement in each step. The individual assessments are then compiled and displayed using a box-and-whisker plot, and then process steps or stakeholder involvement areas with significant deviations from the average are discussed to identify possible improvement actions. Assessment scores from the individual end-of-challenge test summaries are trended over time and evaluated during the SPP.

Challenge test results and formal process assessments are input into the Knowledge Management Database (within MAP), which can be accessed at any time via cell phone or the intranet. Examples of refinements to the PFPD include involving original equipment manufacturer (OEM) representatives during the identification of design options via video conferencing (started in 2004); using the PFPD process to analyze internal process enhancements (started in 2005); and enhancing VOC data analysis to make it more systematic (started in 2006).

6.1c Novel Connect's Emergency Preparedness Process (EPP) is owned by the Human Resources Department. On an annual basis, a virtual, cross-functional Risk Assessment Team (RAT) is responsible for conducting a formal risk assessment of all physical operations and daily process activities. This assessment involves establishing the potential likelihood for and severity of process failure in each key process area. Results of the assessment are summarized on a risk management matrix, and contingent actions are defined for all yellow (medium-level) and red (high-level) risk items. A comparison of this list of contingent actions is then made against the current design of each key process by each process team, with adjustments made as appropriate.

The annual efforts of the RAT are supported throughout the year via the use of job safety analyses, monthly safety training, and annual fire and emergency/evacuation drills. All employees participate in these efforts on a consistent basis, regardless of the process area or location in which they work. In 2005, the IT/IC Team recognized the need to ensure that the organization's technology infrastructure was capable of withstanding major emergencies or disasters. The Rochester-based team, along with representatives from each pod, designed an emergency response plan specific to the technology infrastructure, and the team now conducts annual information system restoration drills.

6.2 Work Process Management and Improvement

6.2a(1) Novel Connect's key work processes, in-process metrics, and success indicators (see Figure 6.1-2) are regularly monitored, analyzed, and improved using the Novel Compass balanced scorecard and the Process Improvement Process (PIP; Figure 6.2-1). The PIP is based on the Design, Measure, Analyze, Improve, Control (DMAIC) improvement approach that is common to many Six Sigma programs, but because Novel Connect expects continuous improvement from all of its key processes, the "Control" segment is not included in this diagram to emphasize the need to "go around the improvement loop." However, the need to standardize and control certain dimensional and specification-driven operations, practices, and measures does remain, and in some cases, statistical process control techniques are used to achieve such goals.

The Design step of the PIP reinforces existing standard approaches to work and, more importantly, helps create a stronger connection among the company's core competencies, the process, and the internal or external customer requirements the process is designed and intended to satisfy. In the measure phase, trend and control charts from MAP, help employees examine process behavior over time and gauge the degree of improvement that has occurred in recent months. Within MAP, the Waste Event (WE) Database helps identify high leverage areas for the process that the company is attempting to improve. Traditional quality tools and Lean/Six Sigma methodologies, along with root cause analysis, are used during the Analyze phase to evaluate possible Improvement options. Finally, during the Improve phase, possible options that match those identified during the Analyze phase are located in the Performance Improvement Database (within MAP) for further development and implementation by either individuals or process improvement teams.

Cross-functional PIP Teams address improvement needs that cross process boundaries. Team involvement is balanced across

Figure 6.1-2 Key Work Processes

Core Competencies Utilized	Key Processes	Requirements	Sample Success Metrics
Value Creation Processes			
Communication, Innovative Niche Product/Feature Design	• Segment definition • Customer satisfaction • VOC validation	• Sales accessibility • Leading-edge features	• Customer satisfaction percentage (Figures 7.2-1, 7.2-3, and 7.2-11) • Customer feedback rate*
Communication, Agility and Rapid Response	• Supplier management • Carrier management • Information calls • Problem resolution calls	• On-time delivery • Cost-effectiveness • Coverage quality • Friendly and helpful staff • Quick problem resolution	• Customer satisfaction percentage (Figures 7.2-1, 7.2-3, and 7.2-11) • Supplier performance index (Figure 7.5-2) • Time per call (Figure 7.5-17)
Innovative Niche Product/Feature Design, Technology Development	• Design • Testing and validation	• Broad coverage areas • Multiple features • Easy to update	• Development cycle times (Figure 7.5-3) • Feature adoption rates (Figure 7.5-3)
Agility and Rapid Response	• Order assembly • Order packaging	• Product protection • Clear labeling	• Damage claims ratio (Figure 7.5-12) • Customer complaints (Figure 7.2-4)
Agility and Rapid Response and Technology Development	• Order taking • Order fulfillment	• Ease of ordering • Site availability	• On-time delivery percentage (Figures 7.5-10 and 7.5-11) • Order accuracy percentage (Figures 7.5-10 and 7.5-11) • Customer returns (Figure 7.5-13)
Communication	• Order taking • Phone upgrades	• Model availability • Feature availability • Knowledgeable staff	• Customer satisfaction percentage (Figures 7.2-1, 7.2-3, 7.2-11) • Stock out percentage (Figure 7.5-6)
Value Stream Support Processes			
Technology Development and Services, Agility	• Customer support • Web site development	• Technology upgrades • Data availability • Rapid response	• Site uptime (Figure 7.5-14) • Data transmission speed (Figure 7.5-5) • Help desk satisfaction (Figure 7.5-15)
Communication	• Hiring • Benefits administration • Internal customer support	• Safe and secure workplace • Competent leadership • Fair wages/benefits	• Employee retention rate (Figure 7.4-4) • Employee satisfaction percentage (Figures 7.4-1, 7.4-2, and 7.4-3) • Employee accident/incident rates (Figures 7.4-8 and 7.4-9)
Agility and Rapid Response	• Accounts receivable • Accounts payable • Reporting and budgeting • Payroll processing	• Accurate information • Timely information • Consistent cash flow	• Receivables as percentage of revenue (Figures 7.3-1 and 7.3-7) • Payables as percentage of revenue (Figures 7.3-2) • Financials accuracy percentage (Figure 7.5-2) • Percent paychecks on time*
Agility and Rapid Response	• Preventive Maintenance (PM) work order completion • Emergency work order completion	• Dependable equipment • High uptime	• Equipment uptime percentage (Figure 7.5-14) • Work order backlog (Figure 7.5-16)
Innovative Niche Product/Feature Design, Communication	• Prospecting • Customer retention • Customer education	• Knowledgeable staff • Informative materials	• Customer retention percentage (Figure 7.2-9) • Sales per customer*
Agility and Rapid Response, Communication	• Process auditing • Product testing • Problem resolution	• Effective root cause analysis and corrective action • Accurate feedback • Rapid response	• Audit scores (Figure 7.5-7) • Defect rates per one thousand units (Figure 7.5-13) • Return rates per one thousand units (Figure 7.5-13)
Agility and Rapid Response, Communication, Innovative Niche Product/Feature Design	• DMAI Improvement Process • Process Improvement Database (within MAP)	• Innovative ideas • Multiple improvement options • High levels of involvement	• Ideas submitted per employee (Figure 7.5-18) • Total ideas implemented (Figure 7.5-18) • Idea backlog level (Figure 7.5-18)

Data available on site

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Figure 6.1-4 Product, Feature, and Process Development (PFPD) Process Flow Diagram

Customer	Sales and Marketing Team, Carrier, and Suppliers	Research and Development Team or Process Owner	Quality	Production
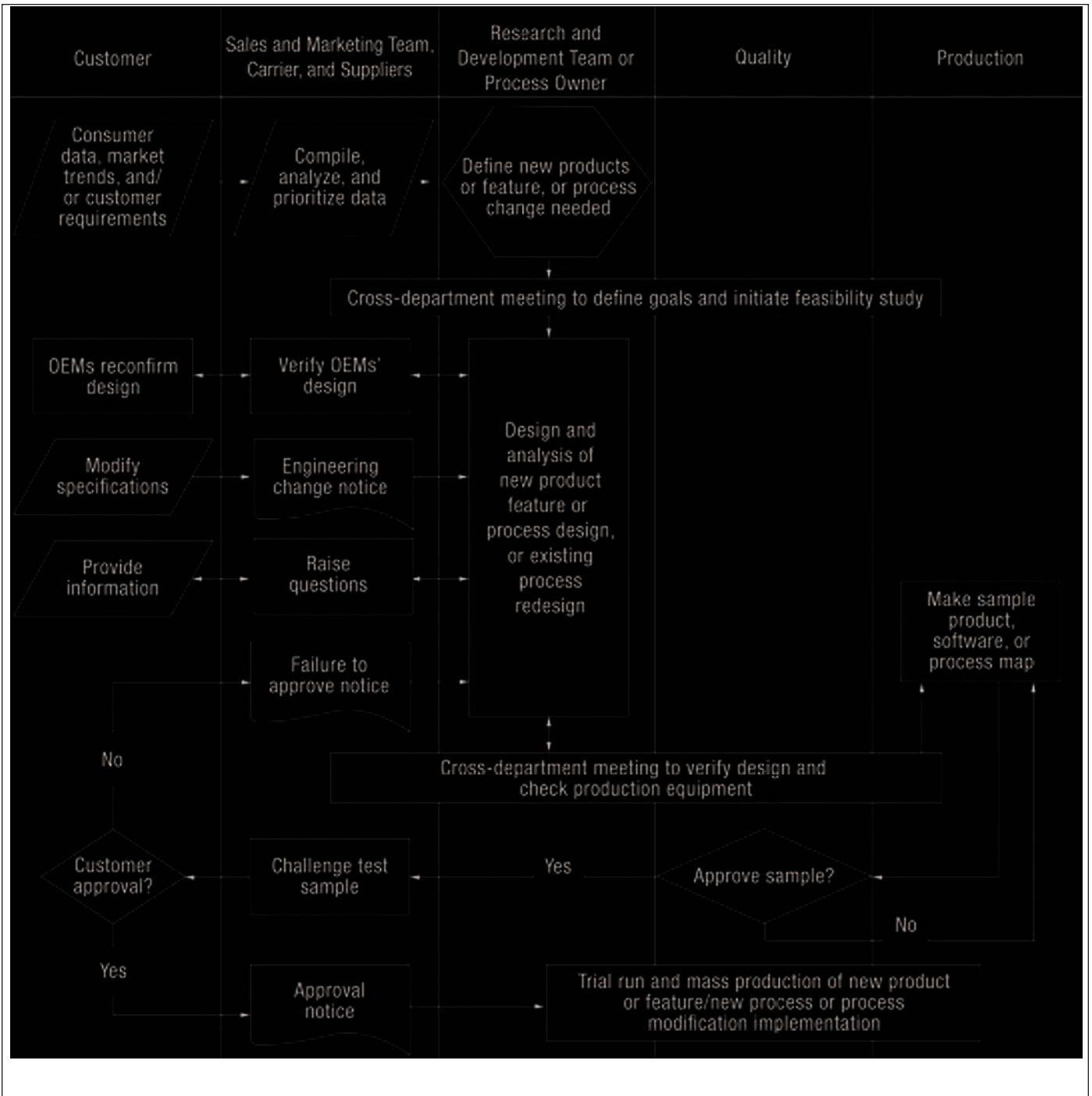
the organization, and a pool of skilled team leaders exists for supporting cross-functional team efforts. One hour per week of improvement team involvement is built into the company's standard cost for its products for each employee, and three hours per week of PIP time is included for each team leader. Performance trends are used as part of the annual SPP to project the number of cross-functional teams that will be needed to support the strategic intent of the organization and to define high-priority, cross-functional team focus points for the coming year.

The designs of all of Novel Connect's key processes are reviewed at least annually as part of the SPP by evaluating the process flow diagrams for each process against the results of the weighted criteria comparisons (see 6.1b[1]). In addition, each process owner is expected to conduct an Improvement Day meeting with all key process stakeholders. Internal and external customers, suppliers, and other stakeholders also are invited to contact the process owner to ensure that any previously unidentified need for process improvement does not go undetected. In 2006, the need to formally evaluate process improvement options was incorporated into each process owner's job description, and the need to demonstrate process improvement success was built into the performance evaluation for each process owner throughout the organization.

Carrier and outsourcing partners, along with key internal and external customers and suppliers, also have password-protected

Figure 6.2-1 Process Improvement Process
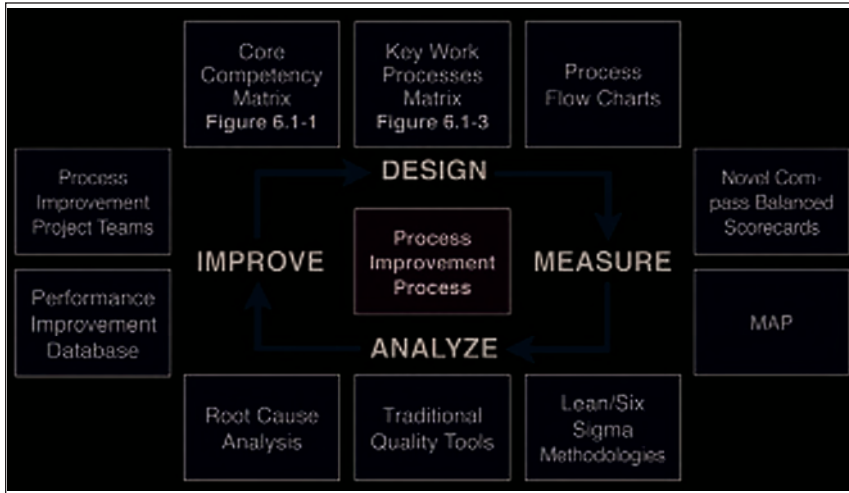
access to the company's Process Improvement Database (within MAP). This access allows them to submit improvement needs directly into the database and to view the current status of any proposal in the database. In 2005, employee suggestions indicated a need for an idea entry screen in Spanish. While all employees are expected to learn English through the company's English as a Second Language (ESL) curriculum (a distance learning/Web-based course of studies), Novel Connect includes Spanish on the entry screen so that new Spanish-speaking hires can contribute improvement ideas.

6.2a(2) All process owners, regardless of their position in the company, are expected to monitor key process data and performance metrics on a daily basis using the MAP system and the Novel Compass balanced scorecards. These are designed to electronically capture key process data whenever possible, but each process owner is still expected to review process performance trends. Commitment to this expectation is gauged and trended over time by tracking the frequency with which each process owner signs on to and uses these systems. Pareto charts and control charts can be easily obtained from MAP to aid process teams in defining high-leverage areas on which to focus. As part of the Triple-M meetings, process owners are required to share significant positive or adverse performance trends, as well as all improvement efforts.

Each Novel Compass scorecard is designed to include metrics on safety, cost, quality, and people. The MAP system allows all process owners to review trends specific to their workgroup and to review comparative trends for other functional groups within the organization. Channel/Retail Sales Team members have an

added performance dimension—revenue growth—to allow them to assess the progress they are making locally, regionally, or across the organization. If an adverse trend in any performance area is noted, Pareto charts of recent waste events (e.g., accidents, service errors, rework, or defects) for a given performance and process area can be recalled to more closely examine, and in turn address, the primary causes of a given performance shortfall.

Process teams meet daily for 5–10 minutes either virtually (via chat, video, or teleconference) or face-to-face to review the previous day's performance and to identify high-priority performance needs for the day. "Novel Notes" communicate key Novel Compass changes on a daily basis across the organization, as well as to those personnel who have been approved to receive this type of information. These updates can be triggered in one of two ways: (1) when a performance goal has been adjusted or (2) by the message sender through the use of predetermined distribution lists. In addition, "Novel Notes" inform all employees of improvements that have been implemented in the past 24 hours and provide them with an intranet link that will take them to a summary of each idea. Each idea summary page is designed in the interactive style of a blog to allow each reviewer to provide his or her feedback on the implemented improvement to the employee who suggested the idea. Visual scoreboards are available in the physical workplace, via cell phone, or through the company's intranet site. Color-coding is used to indicate relative areas of concerns, with these colors shifting based on performance to trigger points.

6.2b Any Novel Connect employee can enter an improvement idea into the Performance Improvement Database (within MAP) at any time. Each day, process owners review those suggested ideas that are specific to their process areas and are expected to prioritize those ideas based on their own perspectives and feedback obtained from team members.

In the past year, cross-functional improvement teams at the Rochester headquarters facility, along with key supply chain partners, started using Lean/Six Sigma methodologies to help further improve the quality performance of their processes. Starting in 2008, pod leaders will be trained in these concepts and tools and expected to apply them to improve their processes. The plan is to continue spreading the use of Lean/Six Sigma approaches to partners in 2009.

7: Results

7.1 Product and Service Outcomes

7.1a Novel Connect measures performance relative to customer requirements for products and services through in-house challenge-and-comparison testing of phones/features prior to release to consumers as well as postconsumer testing with customer focus groups in target niche markets. Most requirements pertain to all

of Novel Connect's key products (cell phones) and to all market segments, but the importance of requirements varies across segments. Novel Connect's five key products are *Novel Complete*, *Novel Secure 1*, *Novel Free*, *Novel Bug*, and *NovelAid* (see P.1a[1]). Its three main market segments are personal, business, and government consumers (see P.1b[2]).

Reliability is a fundamental requirement for all Novel Connect products in all market segments (see Figure 3.1-1). In addition

to segmentation by product and market segment, performance around reliability is segmented into three areas: hardware, software, and service. Hardware performance is measured as failure rates of phones and of specific transmission hardware components (e.g., optics, speakers, and microphones; see Figure 7.1-1a), as well as battery life (see Figure 7.1-1b).

Software reliability is measured as clarity or accuracy as well as uptime. Figure 7.1-2a shows the reliability of social networking applications on the company's cell phones that are important to personal consumers. These applications include high-definition (HD) graphics, ability to watch TV, video messaging, videoconferencing, a camera tool, ability to play music, Internet browsing, and online shopping. Similarly, Figure 7.1-2b indicates the reliability of software important to Novel Connect's business/government consumers; this software includes data processing, word processing, presentation, and financial software. Figure 7.1-2c shows the reliability of personal security software (e.g., home security interface,

panic call interface, and "9-1-1" emergency interface), which is important to a subset of the personal consumer market segment, the users of *Novel Secure 1* and *NovelAid* phones.

Figure 7.1-2d shows the reliability of accuracy software, such as GPS (are you really there?), audio-to-text (is this what you really said?), and direct connect (did you reach the right person?). The reliability of audio-to-text software is shown in Figure 7.1-2e, which measures when a successful launch of audio occurs within three seconds of a verbal command. None of Novel Connect's competitors offer audio-to-text software, so results are compared to a PC-based application.

Service reliability is measured by dropped-call rates, a key measure for Novel Connect's carrier partner, Innovular, and a measure that indirectly correlates with cell phone customer satisfaction. Because users often cannot differentiate between the root causes of dropped calls (e.g., whether they are caused by

Figure 7.1-1a Phone and Transmission Hardware Failure Rates

Figure 7.1-2a Reliability of Social Networking Applications

Figure 7.1-1b Battery Life Under Average User Workloads
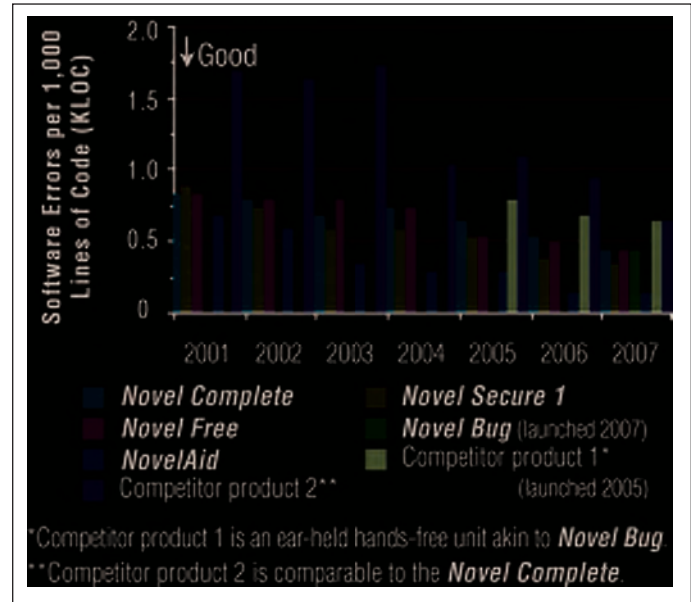
Figure 7.1-2b Reliability of Business/Government Software
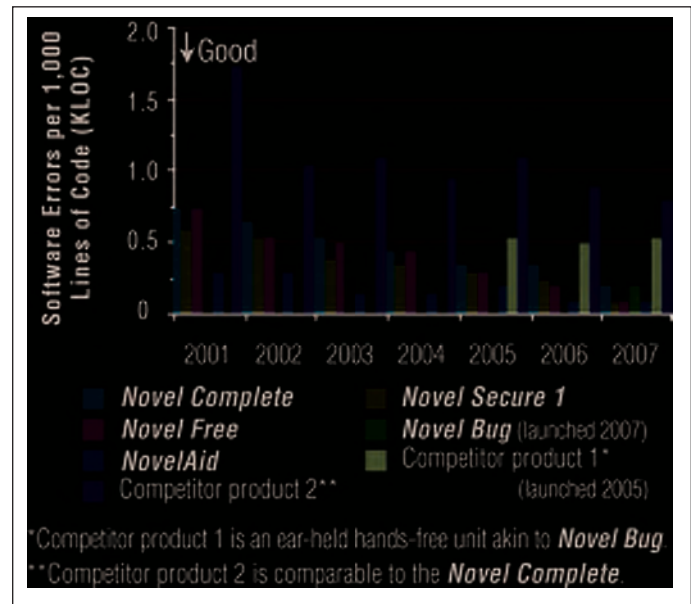
Figure 7.1-2c Reliability of Personal Security Software

Figure 7.1-2d Reliability of Accuracy Software

Figure 7.1-2e Reliability of Audio-to-Text Software
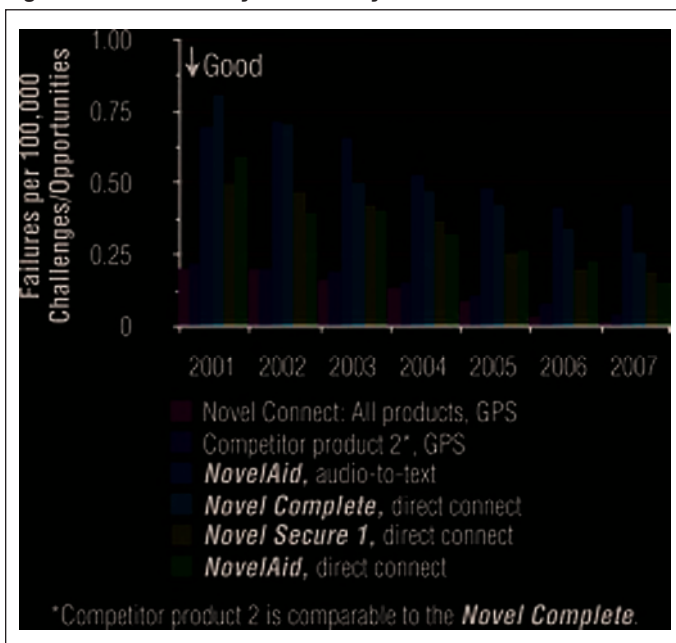
Figure 7.1-3 Reliability of Service: Carrier Dropped Calls
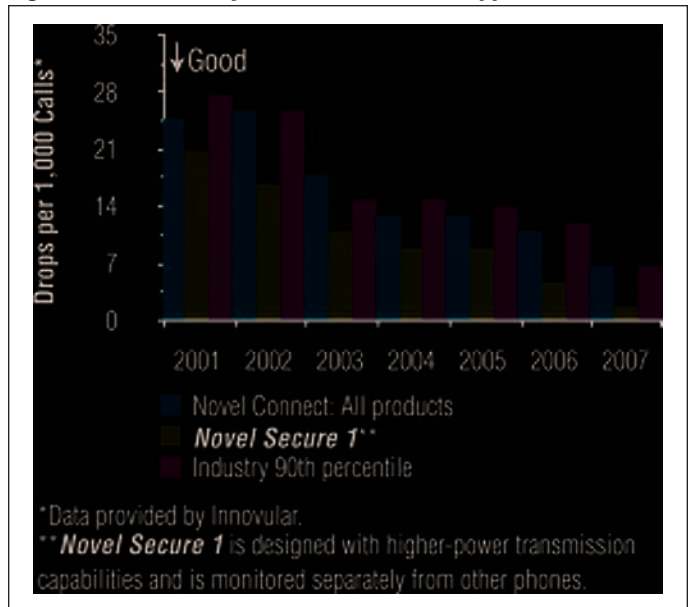
the carrier or by the handset), Novel Connect and Innovular share performance measures and analyses with each other on a monthly basis. Figure 7.1-3 shows performance results provided by Novel Connect's carrier partner.

Convenience and ease of use (Figures 7.1-4a, 7.1-4b, and 7.1-4c) are customer/market requirements that Novel Connect measures directly through customer focus groups and surveys and indirectly by monitoring market performance. Figures 7.1-4a and 7.1-4b contain survey data, and Figure 7.1-4c shows data as a proportion (percentage) of available features actually used by consumers.

For Novel Connect's business/government consumers, a key requirement of the walkie-talkie feature is to sustain signal strength across significant distances. Figures 7.1-5a and 7.1-5b show the transmission distance and clarity of the walkie-talkie feature. In Figure 7.1-5b, a rating of 2 is best; 0 is worst. The test method is standardized using prerecorded audio, as well as standardized test sites.

The security (and compliance with the security protocol) of personal information is important for all of Novel Connect's customers. Secure/encrypted on-board data and secure/encrypted transmission are key requirements of particular importance to the government and business market segments. In Figures 7.1-6a and 7.1-6b, Novel Connect provides results that address both secure communication protocols and standards; the results are determined through end-user survey sampling and focus groups. Encryption reliability results are from preconsumer challenge tests compared to results for competitors' products. No direct measures of competitors' compliance to security protocols are available; rather, Novel Connect has acquired information from customers in focus groups and surveys.

Price (Figure 7.1-7), while important to most consumers, is particularly important to purchasers of *Novel Bug* and *NovelAid* (the Novel Connect product most frequently purchased by consumers on fixed incomes).

One of the key drivers for the development of *Novel Bug* was to provide a hands-free solution for mobile consumers. Figure 7.1-8 shows survey results for the accident rates of drivers who frequently use cell phones while behind the wheel.

Figure 7.1-4a Convenience: Expanding Coverage of Carrier Service*

Carrier % coverage growth vs. baseline
(Percentage increase from 32% 2002 baseline.)
Survey % strongly agree, "I can call anywhere, anytime."
(Percentage increase from 31% 2002 baseline.)
Industry 90th-percentile coverage growth vs. baseline
(Percentage increase from 33% 2002 baseline.)

Figure 7.1-4b Convenience: Multitasking*

"It's easier to multitask on my Novel Connect phone than others I've used."
(Percentage increase from 41% 2002 baseline.)
"It's easier to multitask on my Novel Connect phone this year than last year."
(Percentage increase from 24% 2002 baseline.)
"Multitasking is important to me."
(Percentage increase from 30% 2002 baseline.)

Figure 7.1-4c Ease of Use: Proportion of Features Used*

Novel Connect: All Products
Novel Free
Novel Bug (launched 2007)
Competitor products

*Results are from aggregated data from focus groups and survey results.

Figure 7.1-5a High Power: Walkie-Talkie Component Transmission Distance

Novel Secure 1 and *Novel Complete*
Competitor products

Figure 7.1-5b High Power: Walkie-Talkie Transmission Clarity*

Novel Secure 1 and *Novel Complete*
Competitor products

*Index based on (1) background noise damping and (2) signal modulation (i.e., the voice sounds "real").

Figure 7.1-6a Security Protocol Compliance

Novel Connect: All products; personal data
Novel Connect: All products; on-board data
Novel Connect: All products; transmission data
Competitor products

Figure 7.1-6b Encryption Reliability: On-Board Data and Transmissions
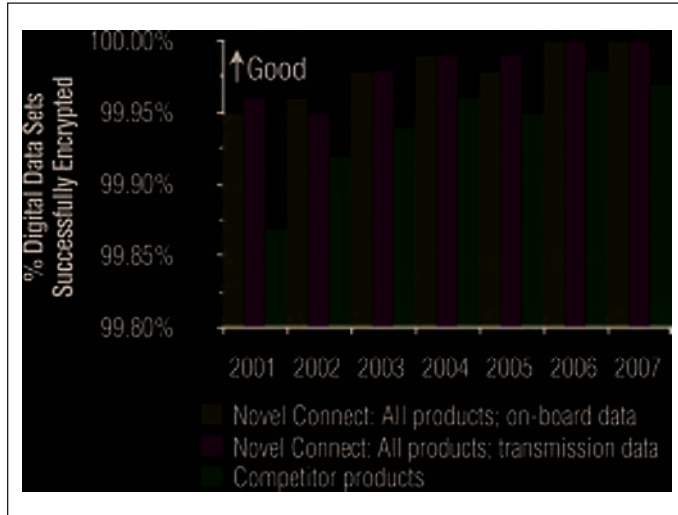
Figure 7.1-7 Unit Price (Least Expensive Phones)
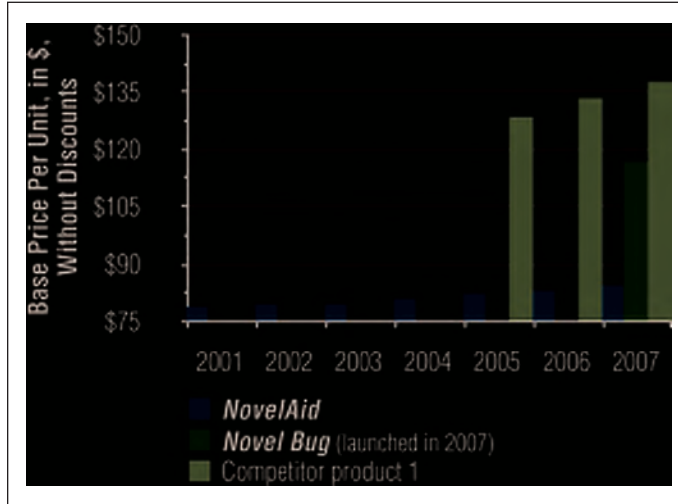
Figure 7.1-8 Driver Safety: Accident Rates
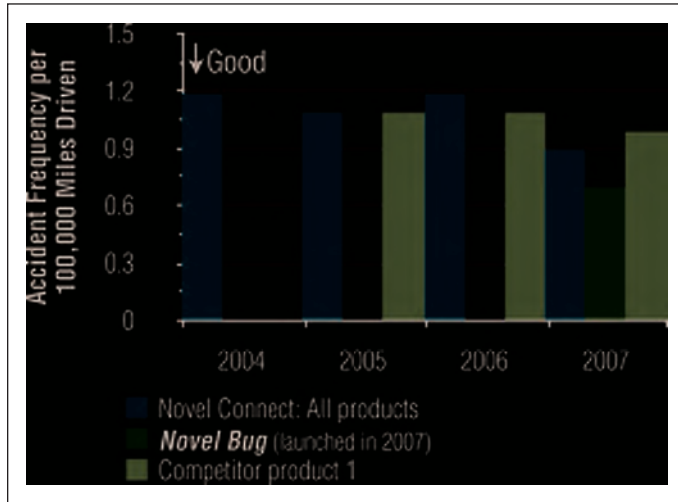
7.2 Customer-Focused Outcomes

7.2a(1) The Allegiance Survey is Novel Connect's primary instrument for gathering in-depth loyalty data. The first quantitative questions in the survey are "How would you rate your

Figure 7.2-1 Allegiance Survey Results—Overall Satisfaction
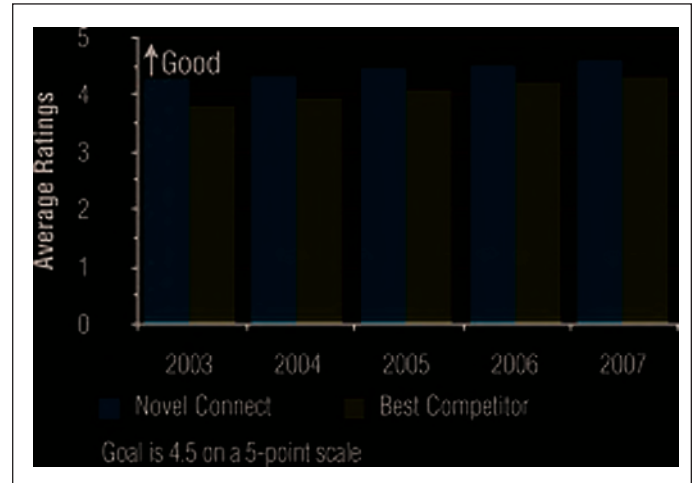
overall satisfaction with your Novel Connect phone?" "How would you rate your overall satisfaction with other phones you have owned or used?" Figure 7.2-1 shows that Novel Connect has improved its average for overall customer satisfaction from 4.32 to 4.61 on a five-point Likert scale and outperformed its best competitor over the last five years.

Figure 7.2-2 shows Novel Connect's results for question G, which asks customers for comparative ratings regarding Novel Connect's ability to respond rapidly to customer requests. The data show the percentage of ratings of 4 and above on a five-point scale. Novel Connect has consistently outperformed the best competitor across all customer types.

The average monthly Pulse Survey results for customers' overall satisfaction are shown in Figure 7.2-3 using a five-point scale. Results from various customer/market segments are available on site. No comparative data are available because Novel Connect is the only cell phone manufacturer that conducts such a survey.

Customer complaints are considered a measure of dissatisfaction. Figure 7.2-4 shows the number of complaints per year by customer niche group in the three main market segments. Novel Connect has seen improvements in all seven key customer niche groups and market segments since 2003.

As mentioned in Category 3, no dropped calls (reliability) is a key requirement for end-users in many of Novel Connect's customer segments. It is a measure of the carrier's system effectiveness as much as it is a measure of the product's performance. Therefore, Novel Connect and Innovular monitor this result carefully together (see Figure 7.1-3).

Novel Connect tracks the ratio of the number of complaints to the number of positive calls and general product inquiries received in the call center. The results are shown in Figure 7.2-5.

The ruggedness of phones is an important feature to most Novel Connect customers, especially those in the "outdoors people" customer niche group. The results in Figure 7.2-6 show that Novel Connect has outperformed its best competitor in all markets on satisfaction with ruggedness.

Figure 7.2-2 Allegiance Survey Results—Agility/Response Time (Question G)
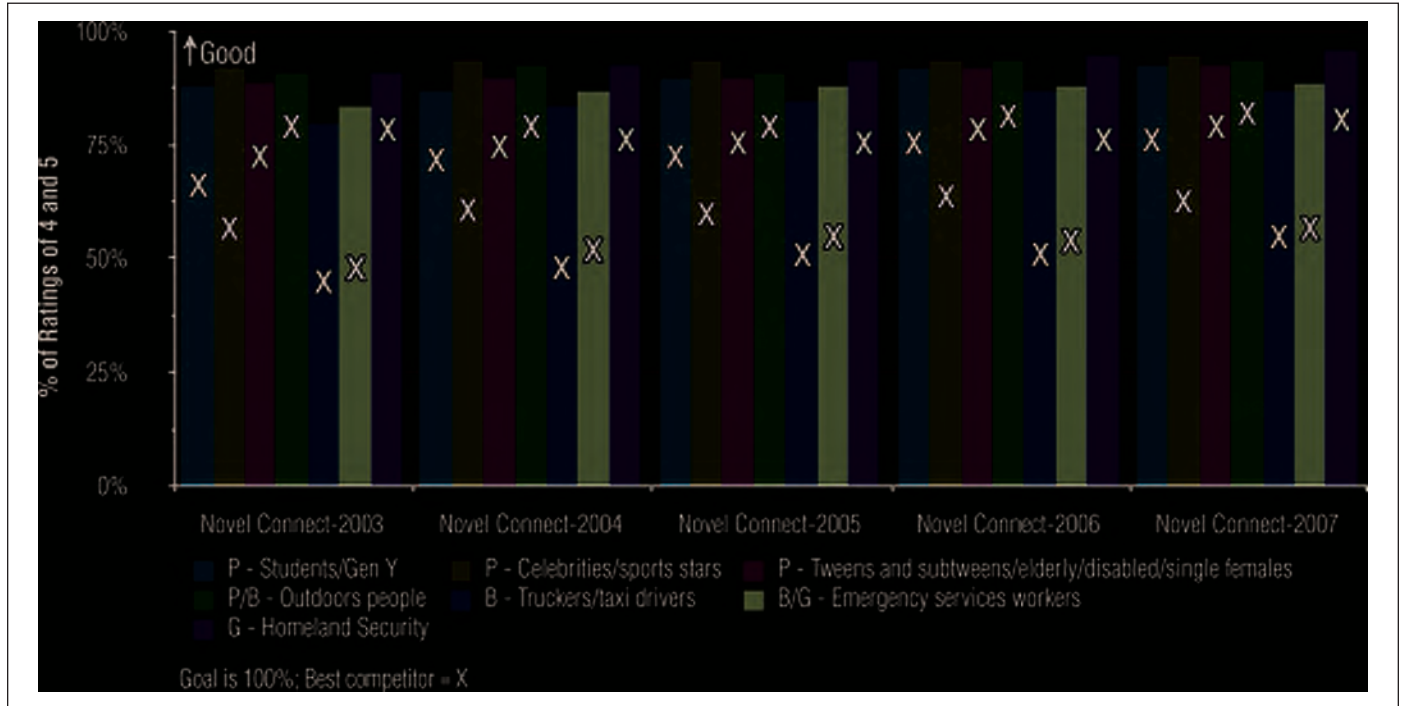
Figure 7.2-3 Pulse Survey Results—Overall Satisfaction
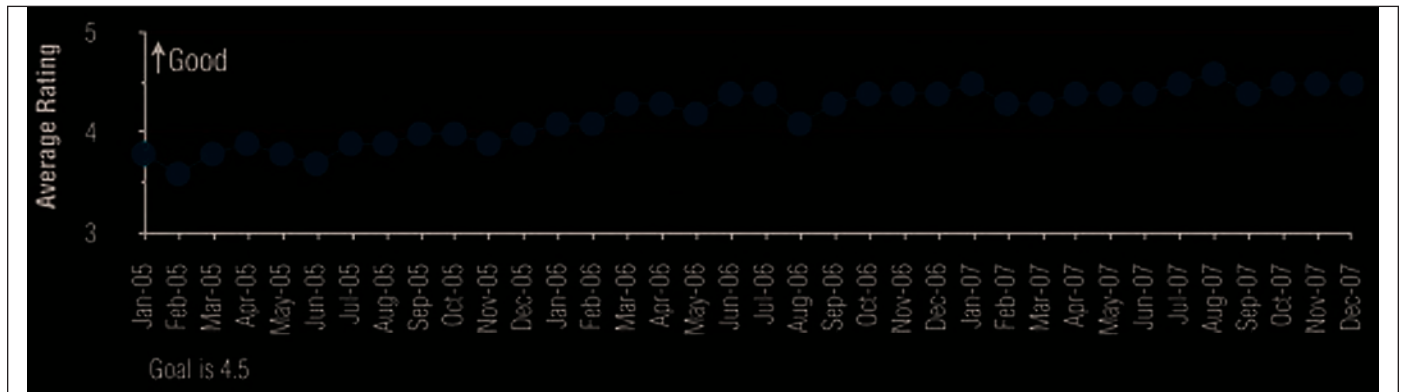
Figure 7.2-4 Customer Complaints
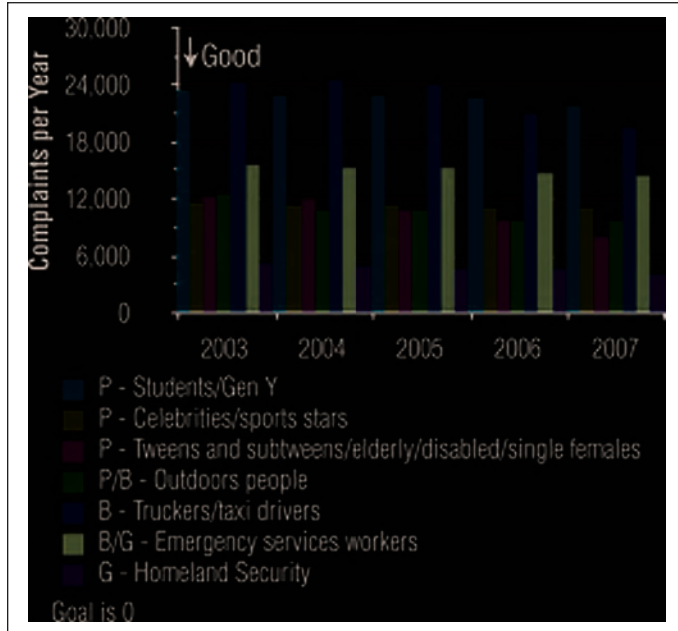
The last quantitative question in the Allegiance Survey is designed to get the survey respondent to consider all factors of phone ownership and rate the "value for price paid." Figure 7.2-7 shows Novel Connect's results for the past five years. In general,
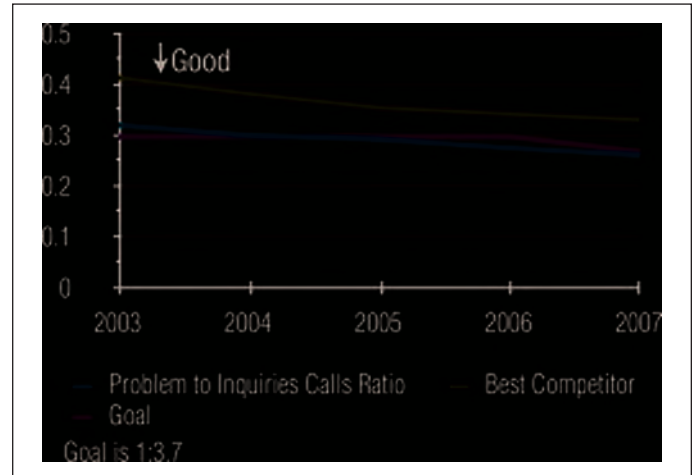
Figure 7.2-5 Ratio of Problem Calls to Positive Calls/Inquiries

Figure 7.2-6 Allegiance Survey Results—Ruggedness (Question E)
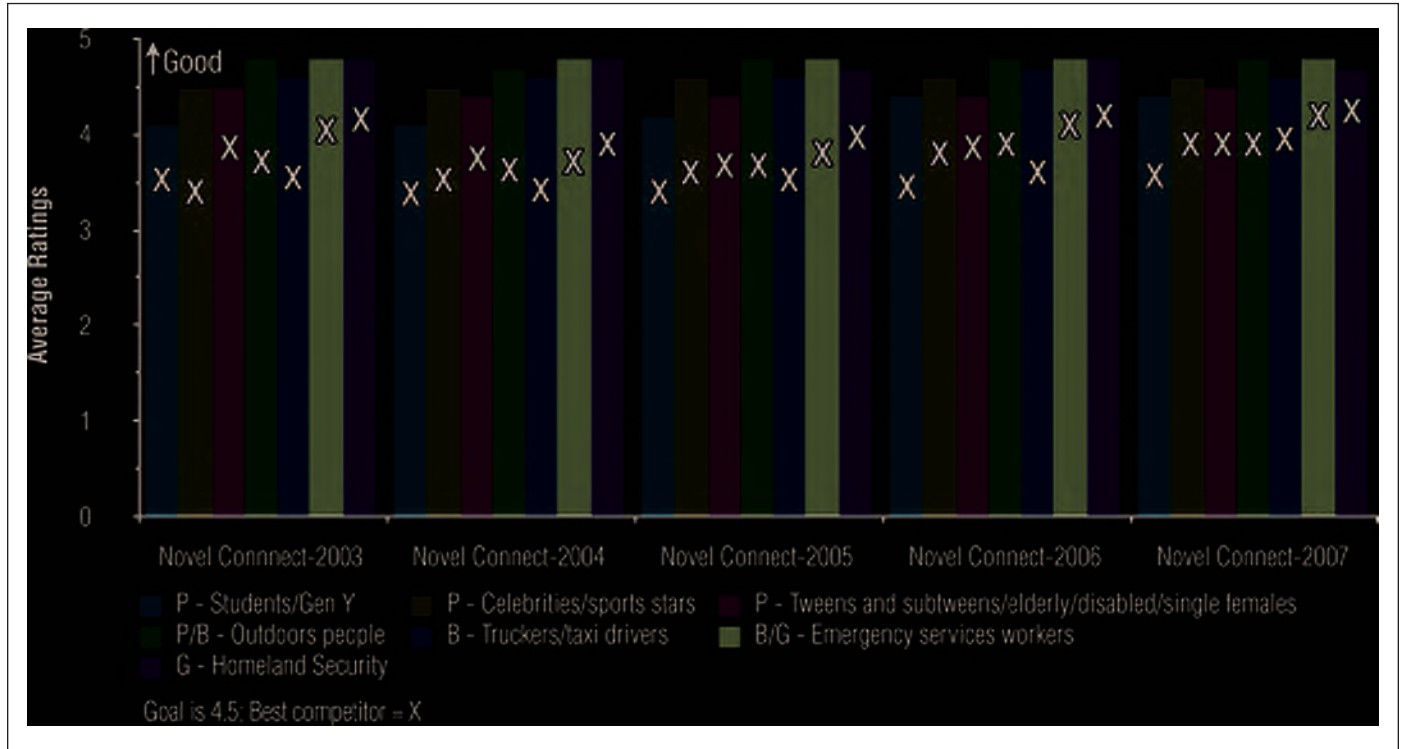
Figure 7.2-7 Allegiance Survey Results—Value (Question K)
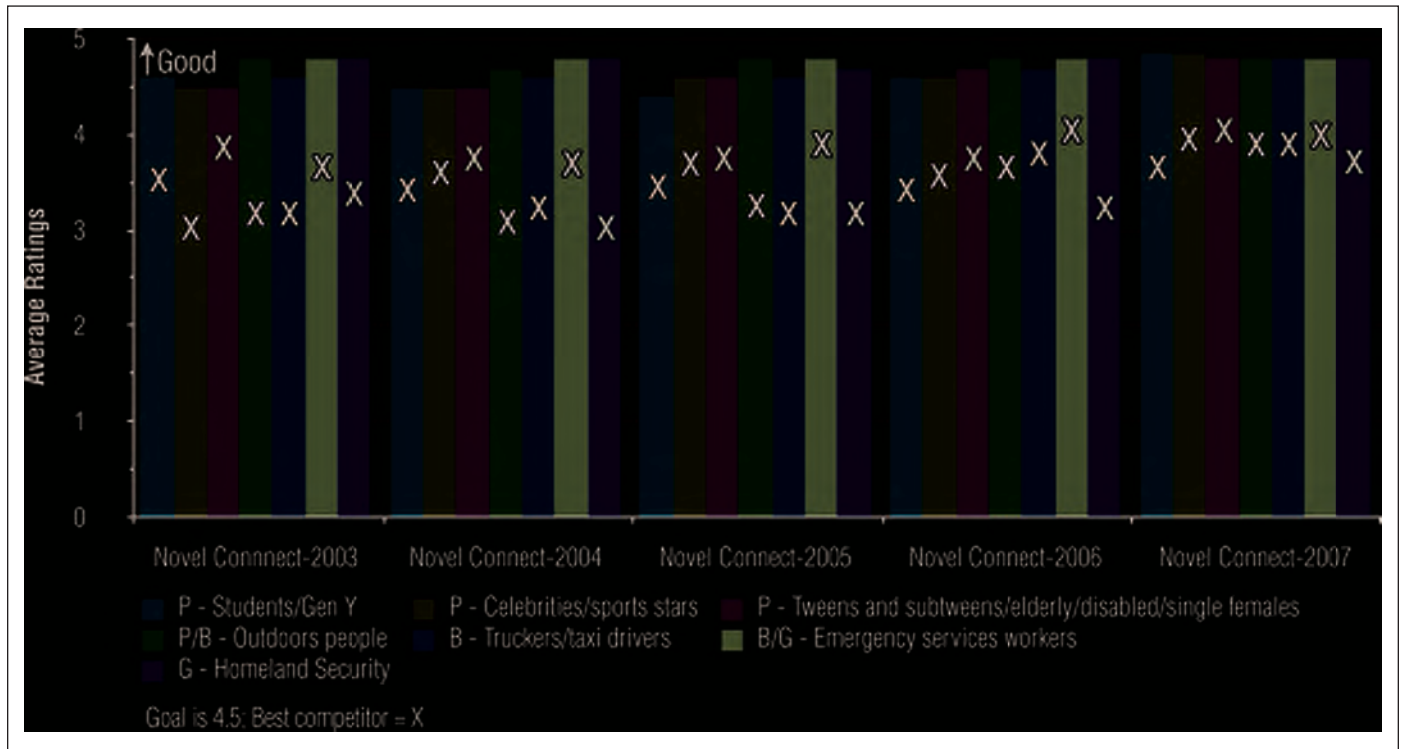
performance has improved, and in all segments, Novel Connect's performance is better than that of its best competitor.

7.2a(2) Novel Connect believes that the single most important gauge of customer loyalty is the customer's likelihood to refer other customers to the company and its products. This Allegiance Survey question was changed from a "yes/no" question in 2003 to a five-point Likert rating for 2004–2007. Figure 7.2-8

shows that Novel Connect's customers are much more likely to refer others to Novel Connect than the customers of its best competitors are to refer people to those companies.

Repeat business is a key indicator of customer loyalty. In 2007, 86 percent of Novel Connect's government and business consumer customers have responded to surveys that they planned to do as much or more business with Novel Connect in the next

Figure 7.2-8 Allegiance Survey Results—Likelihood to Refer (Question I)
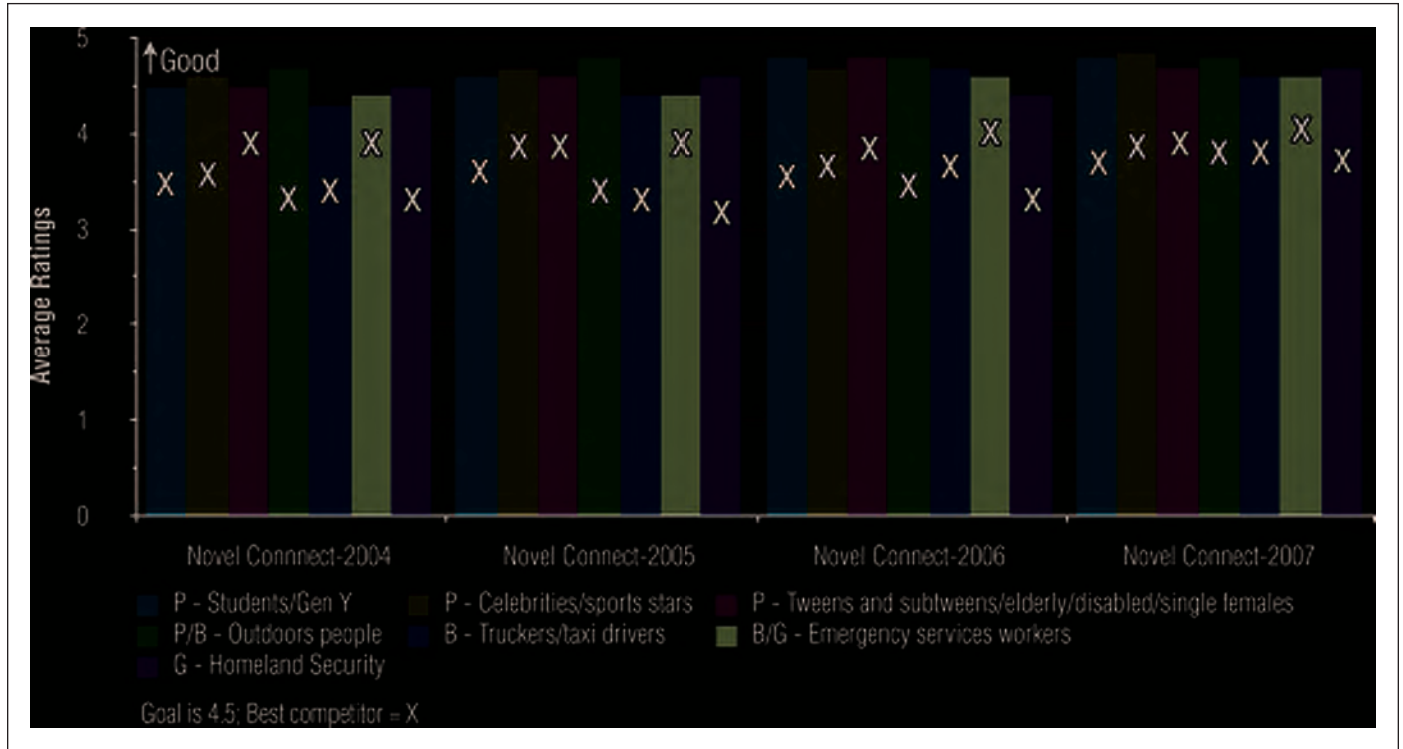
Figure 7.2-9 Percentage of Repeat Customers
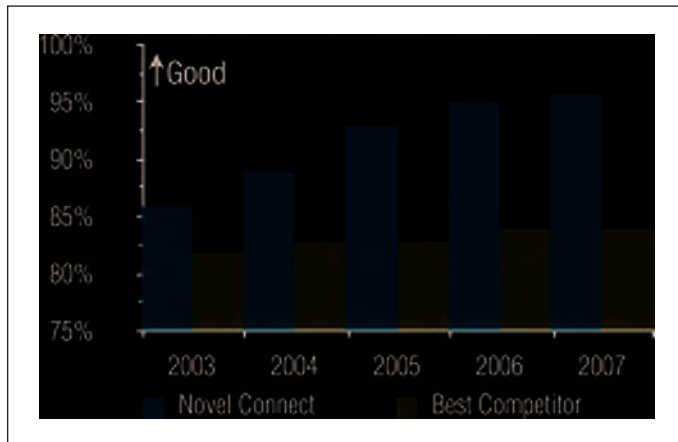
Figure 7.2-10 Customers Willing to Be Contacted

Figure 7.2-11 Allegiance Survey—Overall Results, 2007
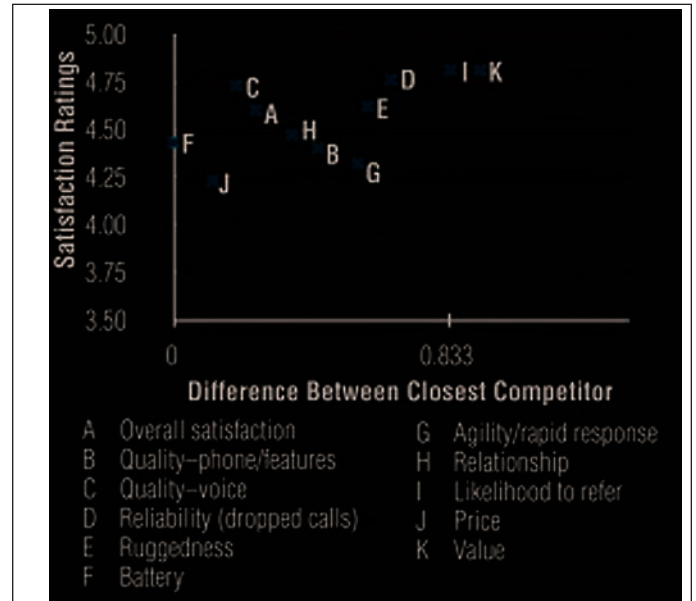
available on site. The data in Figure 7.2-9 also reflect the percentage of customers who gave Novel Connect high Likert-Scale ratings on the Allegiance Survey likelihood-to-refer question.

Figure 7.2-10 shows the percentage of customers giving Novel Connect permission to contact them with information and offers—a leading indicator of the company's ability to develop relationships that increase long-term satisfaction and an enabler for Novel Connect's viral marketing efforts and automated surveying processes.

As described in Category 3 (see 3.2b[3]), Novel Connect tracks its competitive position against 11 key dimensions measured in the Allegiance Survey. As shown in Figure 7.2-11, the maximum

year. Figure 7.2-9 shows Novel Connect's five-year trend in percentage of repeat customers as compared to its best competitor. Novel Connect's performance results for all market segments are

Figure 7.2-12 Allegiance Survey Results—Relationships and Competitive Position
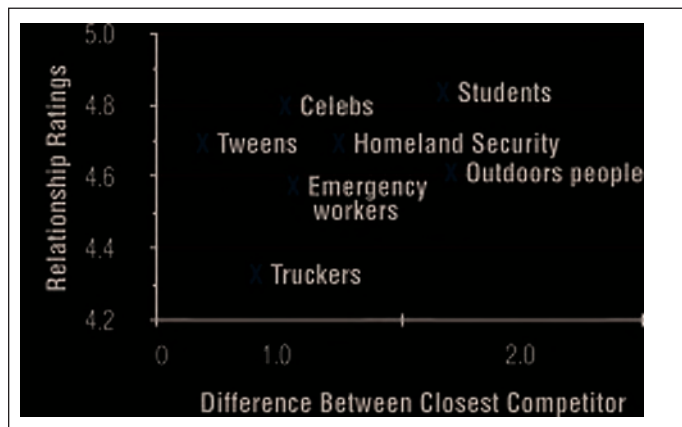
range for the axes on this analysis of the data is 0 to 5 on the vertical axis and -4 to 4 on the horizontal axis (the ranges for this figure have been shortened for clarity). The results show that Novel Connect is performing better than its best competitors in 10 of 11 dimensions and equal to competitors in 1 dimension (F, battery). Likelihood to refer (I) and value (K) are the two highest-rated dimensions, and both are direct indicators of customer loyalty.

Figure 7.2-12 shows Novel Connect's relative competitive position (also see Figure 3.2-2, showing the full instrument without results) by comparing the strength of its customer relationships to that of its best competitors across seven key customer niche groups in its three main market segments in 2007. All Novel Connect's ratings are in the "good corner" (the upper right; the axes have been shortened in Figure 7.2-12 to fit Novel Connect's results). Personal consumers in the students/Generation Y customer niche group rate Novel Connect the highest in this dimension, while personal consumers in the outdoors people customer niche group rate Novel Connect the highest versus the company's best competitors.

7.3 Financial and Market Outcomes

7.3a(1) A key measure of Novel Connect's financial stability is its position with respect to other cell phone providers. Currently, Novel Connect is seventh in U.S. market share based on sales dollars. Figure 7.3-1 shows how Novel Connect has improved its position in the cell phone industry since 2003, experiencing approximately a sevenfold growth in gross revenue.

Novel Connect's focus has always been on profit over revenue growth. To sustain its current level of excellence and to invest in future technology—while providing enhancements to its customer base—Novel Connect needs to sustain a current profit rate of 3 to 4 percent. Figure 7.3-2 shows Novel Connect's current and past profit before tax (PBT).

Novel Connect's long-term investment strategy is targeted to achieve sustainable profit results by providing better services and products to existing and new customers; Novel Connect also seeks to continually reduce internal costs. Therefore, Novel Connect measures its long-term effectiveness by looking at the return from new niche markets in the form of sales growth and

Figure 7.3-1 Gross Revenue (Retail Selling Price in Billion $)

	2003	2004	2005	2006	2007	2008
Treeano LLC	31.9	34.5	39.1	39.6	42.4	39.9
Toomalo	13.0	17.0	23.4	25.8	27.9	27.6
Monkeyfans	9.1	12.7	14.4	13.1	12.3	12.1
Gee L	5.1	7.1	7.5	7.4	8.7	10.1
Rockeins	4.7	6.6	7.0	7.9	6.1	6.4
CueNeb	8.7	6.7	4.0	3.8	4.0	4.1
Novel Connect	0.6	1.3	2	2.7	3.3	3.7
Others	19.0	18.6	17.7	17.6	15.8	19.3
Total	92.1	104.5	115.1	117.9	120.5	123.2
Average selling price/phone ($):	151.00	155.00	142.00	129.00	128.00	127.00
Novel Connect Average selling price/phone ($):	200.00	163.00	143.00	123.00	122.00	123.00

profit. Figure 7.3-3 shows Novel Connect's return on long-term investments since 2003. Even though the company has only allocated 30 percent of total investment dollars to long-term projects, Novel Connect has sustained a return rate of at least 20 percent of dollars invested since 2003.

Figure 7.3-4 shows the ratio between Novel Connect's manufacturing and distribution partners and the revenue generated from sales. This indicator has prompted Novel Connect to identify cost-cutting strategies for both its manufacturing and its distribution partners. The target is to reduce its overall manufacturing and distribution cost by 15 percent.

Figure 7.3-5 shows Novel Connect's ratio of short-term to long-term investment dollars. The target is to maintain a 70/30 ratio.

Figure 7.3-6 shows cash and other liquid assets of the company; it also shows Novel Connect's stability based on current debt. Novel Connect uses this indicator to determine the financial strength of the company. Novel Connect knows that to grow or take advantage of new opportunities, it may need to borrow money against a line of credit or capital assets. However, the SLT does not want to put the company in a financial bind by overextending the line of credit or depleting existing cash.

7.3a(2) Because Novel Connect specializes in niche markets, most market indicators are for those markets served. Unfortunately, limited data are currently available, and Novel Connect is still looking for both competitive and benchmark data to support

Figure 7.3-2 Profit Before Tax (PBT)(Million $)

	2003	2004	2005	2006	2007	2008*
Gross Revenue	552.0	1,254.0	1,956.7	2,709.4	3,250.8	3,693.0
PBT $	16.6	40.1	61.6	90.2	110.5	127.4
PBT %	3.00%	3.20%	3.15%	3.33%	3.40%	3.45%

Projected

Figure 7.3-3 Return on Long-Term Investments

	2003	2004	2005	2006	2007	2008*
Gross revenue (million $)	552.0	1,254.0	1,956.7	2,709.4	3,250.8	3,693.0
Dollars available for short- and long-term investments	8.3	20.1	30.8	45.1	55.3	63.7
Long-term investment dollars (30%)	2.5	6.0	9.2	13.5	16.6	19.1
Revenue from long-term investments	320.0	800.0	1,230.0	1,450.0	1,860.0	2,085.0
Profit from long-term programs	12.2	30.4	46.7	55.1	70.7	79.2
Return on long-term investments	20%	20%	20%	25%	23%	24%

Projected

Figure 7.3-4 Manufacturing vs. Distribution Ratio

	2003	2004	2005	2006	2007	2008*
Revenue dollars/Number of phones sold	200.0	163.0	143.0	123.0	122.0	123.0
Cost of manufacturing and distribution/ Number of phones sold	125.0	120.0	90.0	80.0	82.0	81.0
Manufacturing vs. distribution ratio	63%	74%	63%	65%	67%	66%

Projected

Figure 7.3-5 Short-Term vs. Long-Term Investment Ratio

	2003	2004	2005	2006	2007	2008*
Total investment dollars (million $)	8.3	20.1	30.8	45.1	55.3	63.7
Short-term investment dollars (million $)	5.0	14.3	20.6	29.8	39.2	45.3
Long-term investment dollars (million $)	2.5	6.0	9.2	13.5	16.6	19.1
Short-term investment %	60%	71%	67%	66%	71%	71%
Long-term investment %	40%	29%	33%	34%	29%	29%

Projected

Figure 7.3-6 Current Ratio

	2003	2004	2005	2006	2007	2008*
Liquid assets + equity line (million $)	11.3	30.1	40.8	65.1	75.3	95.7
Long-term debt (million $)	5.0	8.0	8.0	6.0	6.0	10.0
Short-term debt (million $)	3.0	5.0	9.0	10.0	10.0	10.0
Total debt (million $)	8.0	13.0	17.0	16.0	16.0	20.0
Liquid asset ratio	1.41	2.32	2.40	4.07	4.71	4.79

Projected

Figure 7.3-7 Revenue from Leading Niche Markets
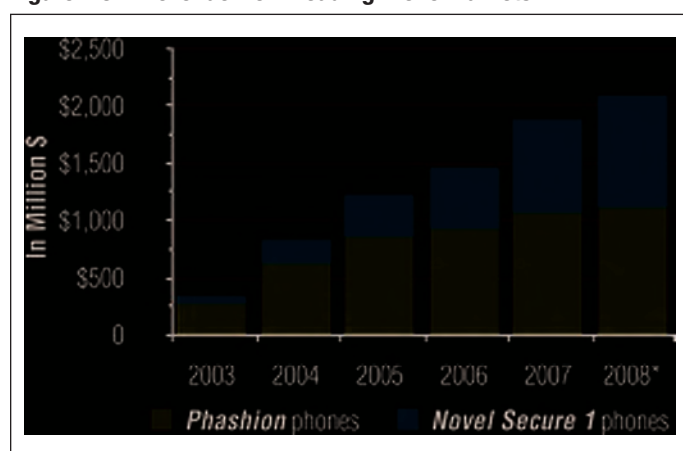
Projected

its niche-market positions. Novel Connect believes that—based on its financial strength, customer satisfaction results, and continued repeat business—it is the leader within its markets.

Over the past two years, Novel Connect has seen an explosion in the need for two of its product lines: **Novel Complete** phones (including **Phasion** phones) and safety/security phones (**Novel Secure 1**). Figure 7.3-7 identifies the revenue generated and revenue growth from these product lines.

7.4 Workforce-Focused Outcomes

7.4a(1) To measure workforce satisfaction and engagement, Novel Connect began using the Trot Engage 14 survey in 2005. Today, all Novel Connect employees take a Trot survey annually. Figure 7.4-1 shows the questions on the Trot survey.

Figure 7.4-2 shows Novel Connect's performance across all 14 dimensions over the last three years. Novel Connect's level of overall satisfaction (measured by question 14) has increased for the last three years and is now better than the 90th-percentile level (top 10 percent) of organizations participating in the Trot

survey. Most of the other workforce engagement dimensions also show improvement over the last three years.

As an indicator of workforce development, Figure 7.4-3 shows the percentage of Novel Connect employees participating in a cross-functional team as part of a PIP. The percentage has steadily increased over the last four years, and the company goal also has steadily increased.

7.4a(2) A key measure of both workforce engagement and workforce capacity is employee retention. Novel Connect's percentage of employees departing the company voluntarily has decreased since 2005 and is now equal to the turnover rate of a Baldrige Award recipient in manufacturing (see Figure 7.4-4).

As a measure of workforce capability, the percentage of Novel Connect employees completing advanced proficiency training (Figure 7.4-5) has increased every quarter since the beginning of 2003, reflecting Novel Connect's goal of having at least 75% percent of staff trained at all times.

Figure 7.4-6 reflects Novel Connect's strategy of hiring from within the company and encouraging employee referrals for open positions. Since 2003, results for both measures have improved, as employees hired through these strategies have increased as a percentage of total job vacancies filled.

7.4a(3) Valuing employees is a core value of Novel Connect; safety in the Rochester manufacturing facility and in the workforce's home offices/pods is a key goal. Figure 7.4-7 shows safety excellence at Novel Connect, as measured by the days away from work due to employee injuries/restricted time (DART) rate. For both its manufacturing and its office/pod environments, Novel Connect has seen an improvement in DART results during the last four years, and for both environments, Novel Connect's performance level is better than the 80th percentile based on data from the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA). Similarly, Novel Connect's Total Recordable Rate (TRR; Figure 7.4-8) of OSHA-reportable employee injuries and illnesses per 100 full-time workers has improved for both workplace environments. Figure 7.4-9 shows the number of repetitive motion injuries among Novel Connect's office/pod employees (all those not based at the manufacturing plant) in recent years.

Novel Connect offers prevention-based wellness programs (e.g., reimbursement for participation in health clubs and smoking cessation programs) for employees and has seen significant

Figure 7.4-1 Trot Survey Questions

Number	Question
1	The company's expectations of me are clear.
2	I have the appropriate training and materials to do my work.
3	I understand my contribution to the company's success.
4	I receive regular recognition or praise.
5	There is frequent and open communication at all levels of the company.
6	Diversity is apparent and valued throughout the company.
7	I value my involvement in the team structure.
8	I feel that my values are aligned with the company's values.
9	All employees are dedicated to performance excellence.
10	I have a mutual friendship with a fellow employee.
11	My mentor contributes to my successful growth and development.
12	I have continued to learn and grow.
13	I can see a long-term career with this company.
14	Overall, I am very satisfied with working here.

Figure 7.4-2 Workforce Satisfaction: Scores for Survey Questions 1–14
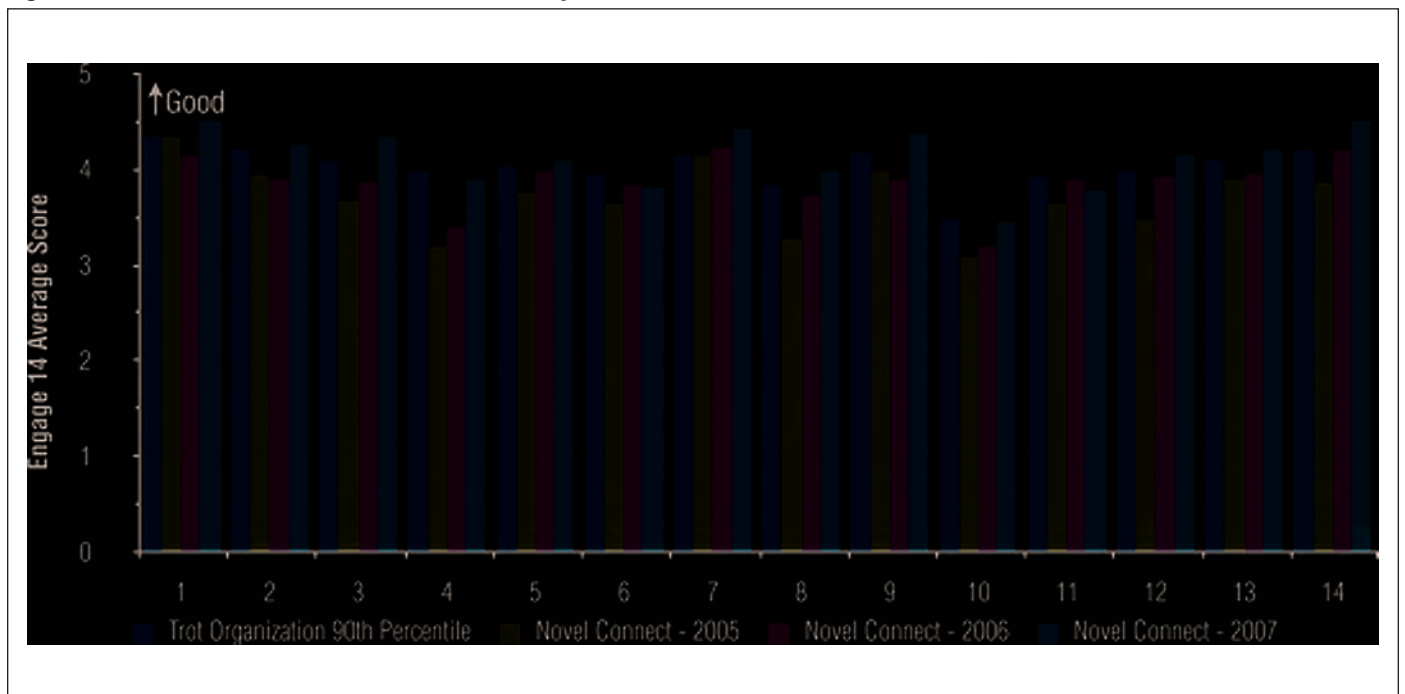
increases in recent years in the percentage of employees participating in these programs, as shown in Figure 7.4-10.

7.5 Process Effectiveness Outcomes

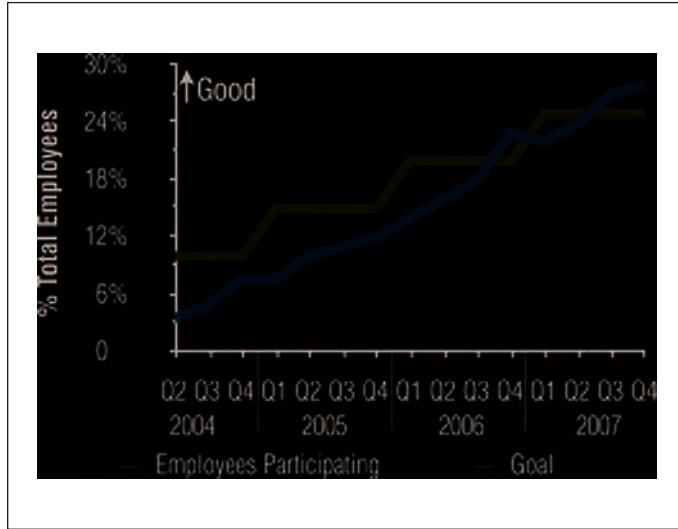**Figure 7.4-3 Employee Participation in PIPs**

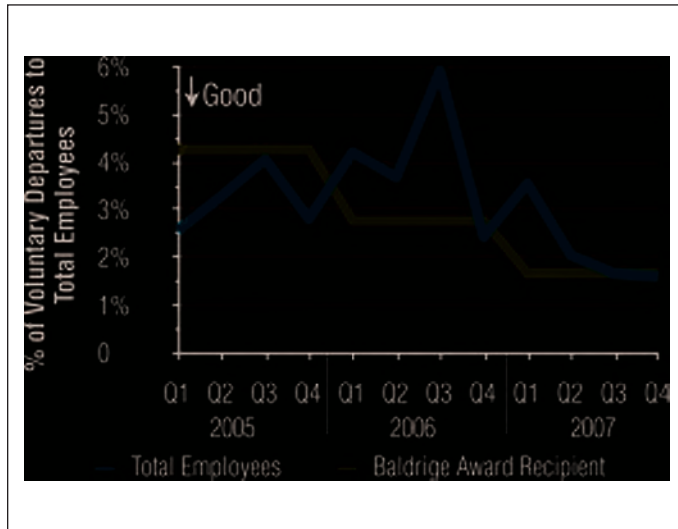**Figure 7.4-4 Voluntary Turnover Rate**

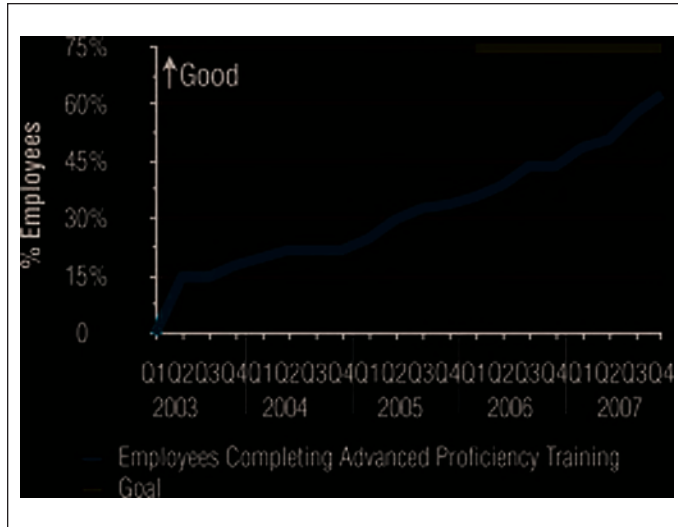**Figure 7.4-5 Advanced Proficiency Training Completion Rate**

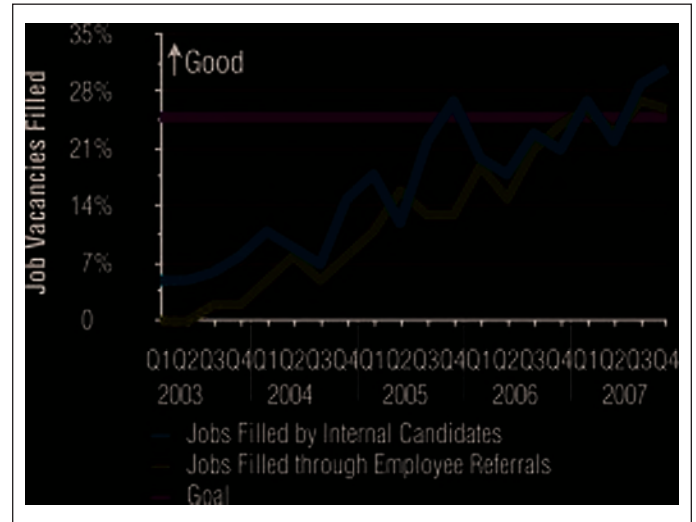**Figure 7.4-6 Job Vacancies Filled From Within or By Employee Referrals**
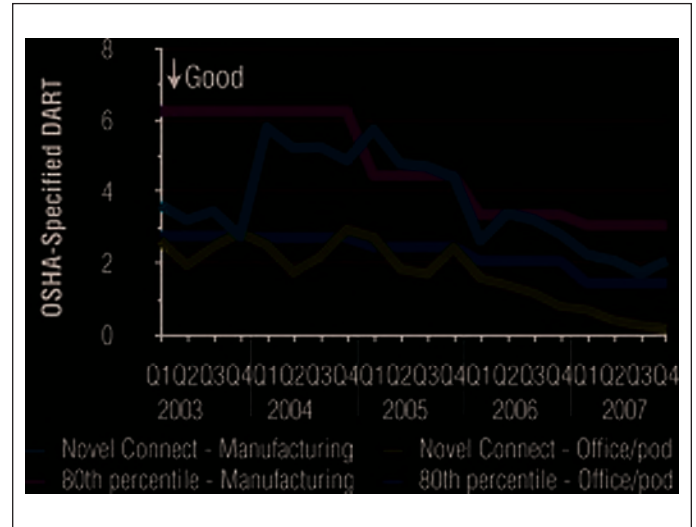

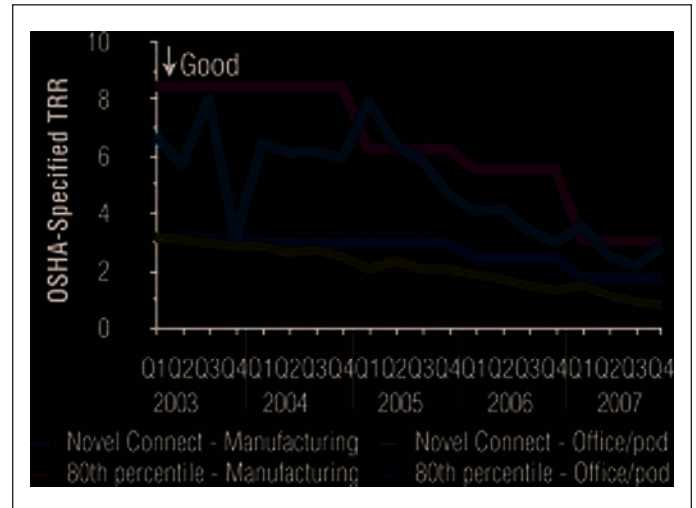**Figure 7.4-7 Days Away/Restricted Time**
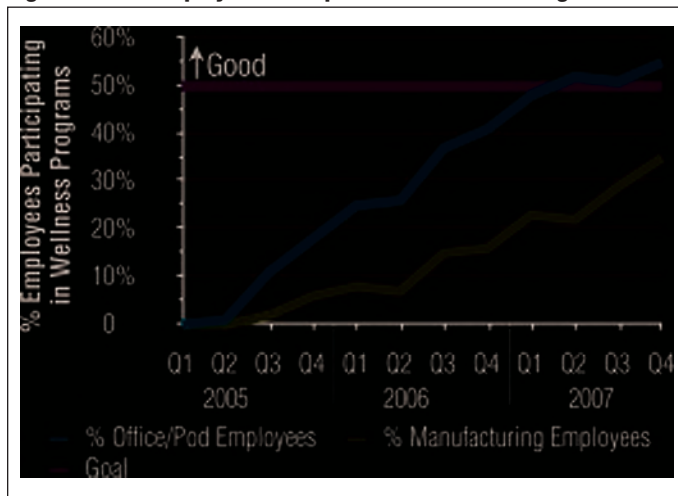

Figure 7.4-8 Total Recordable Rate

Figure 7.4-9 Repetitive Motion Injuries (Office/Pod)

	2004	2005	2006	2007
Injuries	76	55	48	44
Total FTEs	1,415	1,422	1,430	1,450

Figure 7.4-10 Employee Participation in Wellness Programs

Figure 7.5-1 Customer Satisfaction With Carrier

7.5a(1) Because Novel Connect uses external sources to help it achieve its strategies and objectives, the performance of external suppliers has a significant influence on Novel Connect's overall work system performance. For example, Novel Connect relies on the performance of a single source carrier (Innovular) to ensure that its customers get the levels of connectivity and transmission speeds that they expect. The Allegiance Survey, which is designed to determine the health of longer-term factors affecting customer loyalty, retention, and likelihood to refer, is used to measure customer loyalty to both Novel Connect and its carrier on a five-point scale; Figure 7.5-1 translates the scale to a percentage to reflect the increasing level of customer satisfaction with Innovular.

Novel Connect uses the Supplier Performance Index (Figure 7.5-2) to consistently monitor the performance of its key suppliers, both in terms of the suppliers' ability to satisfy Novel Connect's expectations, as defined in each supplier's performance agreement, and to evaluate the degree to which key suppliers are improving their abilities to meet Novel Connect's needs over time. The index is made up of four key factors: pricing value, material quality, on-time delivery, and order accuracy. These values are derived by gauging the percentage of performance to goals through an internal survey (pricing value)

or order-to-order performance (i.e., material quality, on-time delivery, and order accuracy) via another survey.

In support of its core competencies (see Figure 6.1-1), Novel Connect tracks both the cycle time required to develop and introduce each new product, feature, or process and the adoption rate for those new features that are introduced. Figure 7.5-3 details Novel Connect's progress in reducing development cycle times over the past five years and the degree to which the organization has been successful in defining and introducing products and features that are highly desired by its customers. Because benchmarks for these metrics are difficult to obtain (Novel Connect is already leading the industry in this area), the organization relies on besting its own previous year's performance, thus using its own success as a benchmark for future performance.

Novel Connect recognizes that it cannot sustain its success over time if it does not provide increasingly higher levels of value to its customers. In 2003, the Value Creation Index (Figure 7.5-4) was created to help gauge the degree to which work systems, products, and product features are adding value; this is determined by the number of patents received, the rate of new feature introduction, and most important, the percentage of each year's revenue that comes from new, as opposed to existing, products. While it is important to develop products and services worthy of patents and to regularly introduce new features, Novel Connect thinks it is more critical to develop and introduce products and features that are quickly adopted by customers. The benchmark shown in Figure 7.5-4 is based on the performance of SooperdooperSoft, which is recognized as one of the leading global computer software providers.

Consistently increasing transmission rates, both for uploading and downloading data, are key to meeting and exceeding customer expectations. Consistently improving these transmission rates also helps Novel Connect ensure that it is partnering with the right carrier, as it is the carrier's transmission systems that determine the rate at which messages, telephone calls, videos, and other data can be sent and received. For the past five years, Novel Connect's carrier has provided transmission rates that are the best in the industry (see Figure 7.5-5).

Because Novel Connect relies heavily on outsourcing to help meet its customer-focused strategic objectives, the Value Stream Effectiveness Index plays a central role in helping to monitor and continually improve internal stock availability and retail stock availability. Cost control is monitored within the value stream as well, primarily by tracking and increasing inventory turns across the organization. The index results shown in Figure 7.5-6 reflect the success that Novel Connect has experienced relative to balancing the need to have products on hand while also keeping inventories as low as possible. The benchmark shown is based on a compilation of "best-practice" ratios published each year by the American Production and Inventory Control Society (APICS).

Quality system audits are performed across the organization to help gauge the degree to which different management systems—such as training, work direction, policies and procedures, commu-
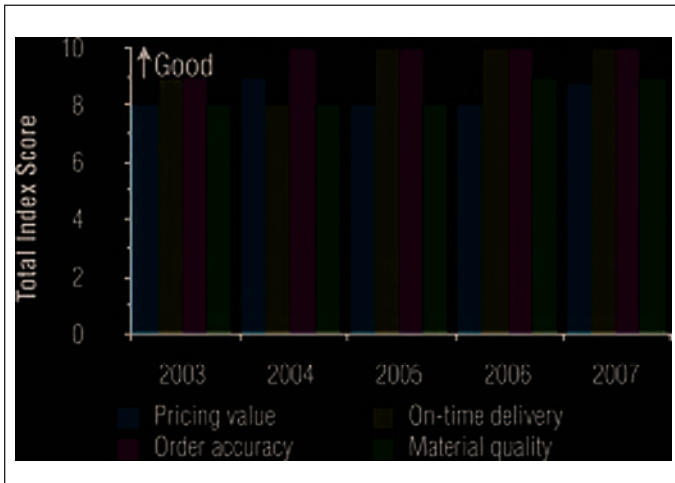
Figure 7.5-2 Supplier Performance Index
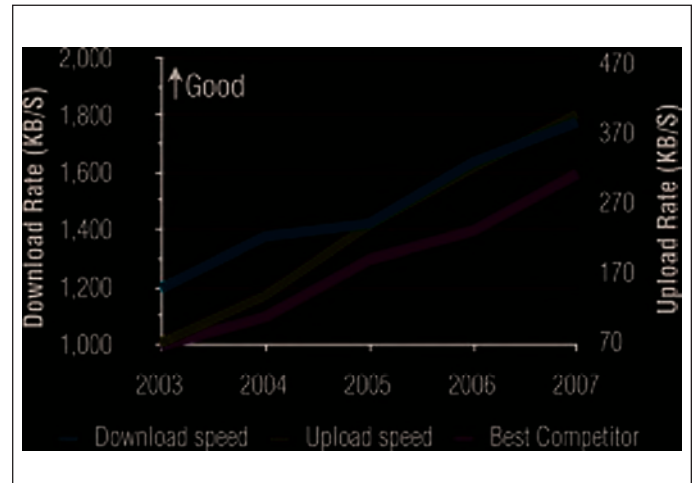

Figure 7.5-5 Data Transmission Rates

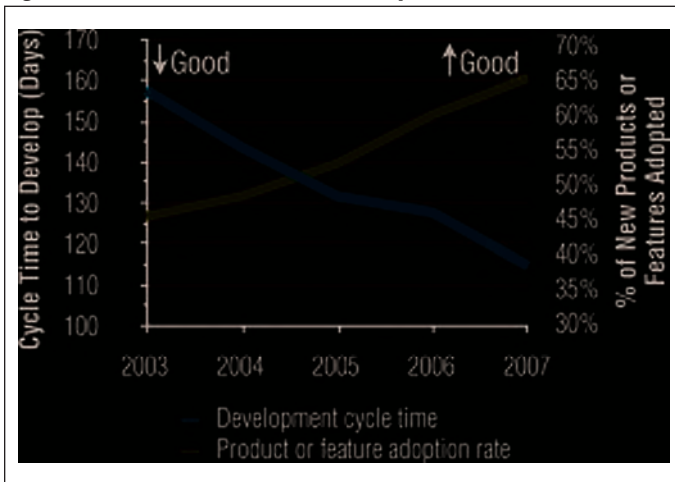**Figure 7.5-3 Product and Feature Development Process Effectiveness**
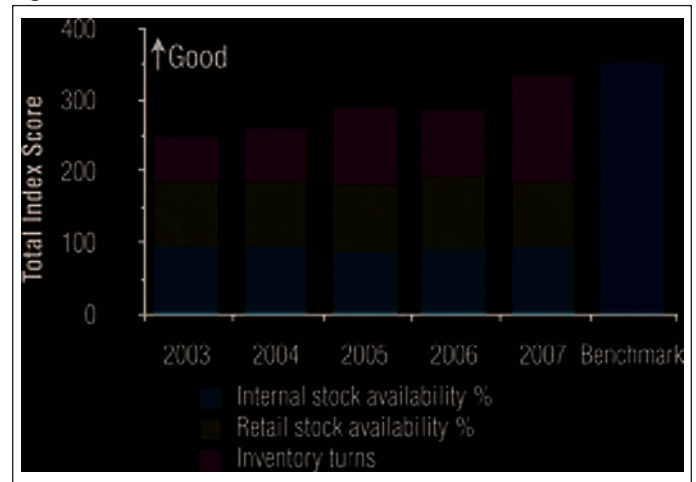

Figure 7.5-6 Value Stream Effectiveness Index

Figure 7.5-4 Value Creation Results

Measures	2003	2004	2005	2006	2007	Bench-mark
Revenue from new products released within the past two years	35%	39%	41%	54%	56%	50%

nications, and quality assurance—are supporting the needs of the different functional groups (e.g., pods and teams) within Novel Connect. An annual internal audit is patterned after the Baldrige Criteria, with a maximum score of 1,000 points being the best possible. Monthly audits also are conducted in each process area, with 100 percent compliance as the goal. Ratio of findings per audit as well as audit score averages are obtained by aggregating the results from these monthly audits. Challenge tests are used (see 6.1b[3]) to verify that new products and features will function as designed and are a necessary part of the development process; however, these costs must be managed (see Figure 7.5-7).

A key measure used by Novel Connect to gauge overall work system effectiveness is the ratio between the sales growth rate and the growth rate of the Novel Connect workforce. Ideally, if Novel Connect is realizing process improvement success and

optimized work system performance, sales dollars should grow at a faster rate than the growth rate of the workforce. Figure 7.5-8 illustrates how the company has been successful in both of these areas, as its people utilization ratio has consistently increased from year to year over the past five years.

At the conclusion of annual fire and emergency/evacuation drills (see 6.1c), an online survey is used to gauge the effectiveness of the event. Figure 7.5-9 shows the aggregate effectiveness scores for each of the annual drills that has been performed across the organization. Survey results segmented by each pod and the Rochester location are available on site.

7.5a(2) In-process metrics within Novel Connect's value stream are provided below as a reflection of the success that has been realized in each process area (i.e., assembly and packaging processes) across the organization.

While Novel Connect outsources a significant percentage of its cell phone production volume, it maintains an in-house assembly and packaging operation in Rochester for those products that are considered to be of a specialty nature. Because in-house production focuses on newer products with features that are intended for an "early-adopter" market, the need to consistently improve performance results in the assembly and packaging

Figure 7.5-7 Quality System Performance

	2003	2004	2005	2006	2007	Goal
Annual quality systems audit (based on Baldrige Criteria)	456	490	517	525	570	675
Findings per audit average	17.3	16.7	15.9	15.2	14.7	
Monthly audit score average	96.5	96.9	97.3	98.0	98.9	
Average cost per challenge test	789	801	775	790	756	

process areas is critical; the assembly and packaging effectiveness of the Rochester site is shown in Figures 7.5-10 and 7.5-11.

Both Figures 7.5-10 and 7.5-11 reflect improvements in efficiency over the past five years relative to Novel Connect's target cycle time and rework reduction. To help drive process improvement in the assembly and packaging areas, Novel Connect annually adjusts its target cycle time downwards by 10 percent, creating a new annual goal for each operating year and making year-to-year efficiency gains much more challenging to attain.

While Novel Connect tracks and trends shipping productivity and cost metrics, it considers its damage claims ratio (Figure 7.5-12) to be one of its most important shipping process measures. The damage claims ratio (based on the total cost of damage claims made by the end-customer versus the dollar value of all products shipped) reflects the integrity of the product packaging, the quality of the container loading process by either Novel Connect employees or those of manufacturing partners, and the manner in which partners' freight carriers handle and deliver packages. The 1 percent benchmark value shown is based on a best-practice claims ratio from Best-of-the-Rest Freight Carriers, which is annually recognized as being one of the leading transportation companies in the United States.

Results related to two key measures of product quality—defects per 1,000 units produced and returns per 1,000 units shipped—are shown in Figure 7.5-13. In 2007, Novel Connect realized its lowest defect rate in five years as a result of process improvements that have been made in the assembly process and through the improvement of its supplier management practices. While the return rate has remained relatively flat over the past three years, the organization thinks that these results still indicate that some success has been made given the significant increase in product and feature sophistication that has occurred over the same period of time.

A high level of system uptime is critical to supporting both Novel Connect's internal communication needs and the needs of its customers. In turn, both Novel Connect's intranet system outage minutes and its carrier's (Innovular's) outage minutes are trended over time to ensure that system failures and dropped calls rarely occur (see Figure 7.5-14). Over the past two years,
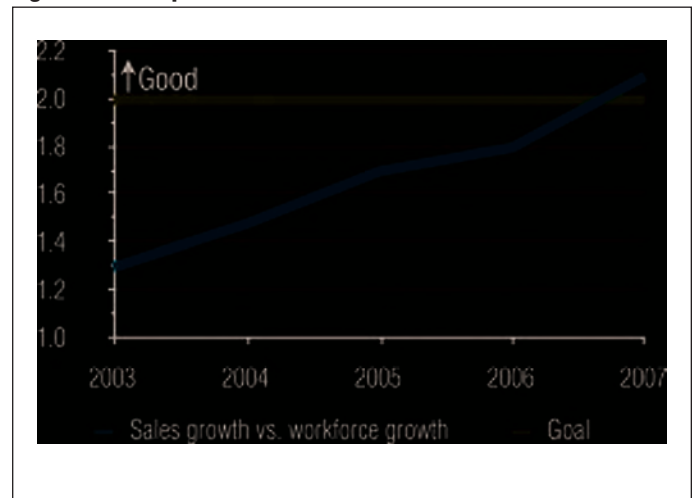
Figure 7.5-8 People Utilization Ratio

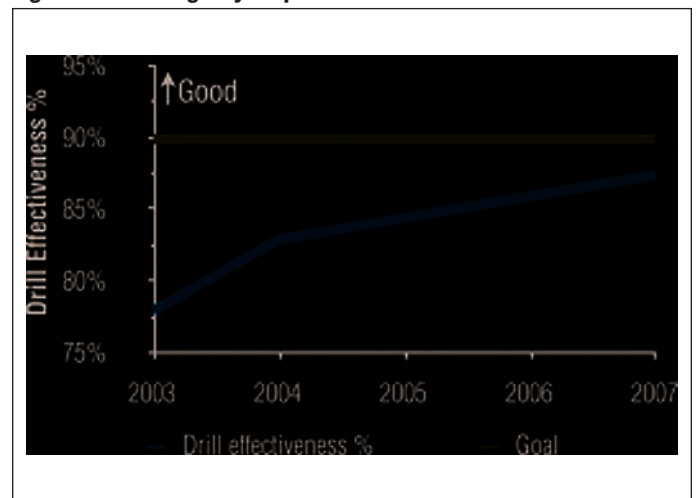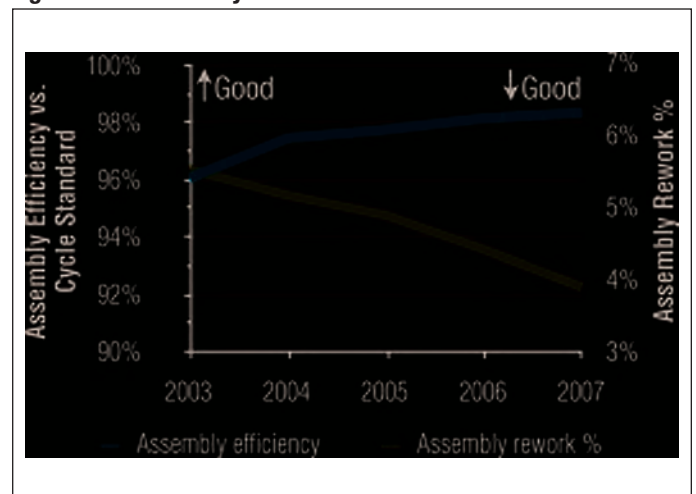**Figure 7.5-9 Emergency Preparedness Effectiveness**

Figure 7.5-10 Assembly Process Effectiveness

both Novel Connect's and Innovular's systems have approached the benchmarks for system uptime. Novel Connect compares its system uptime with the performance of Bloodred Orange, a leading global hardware and software provider, and the carrier uptime benchmark is based on the current performance of Rushed, a leading cell phone service provider.

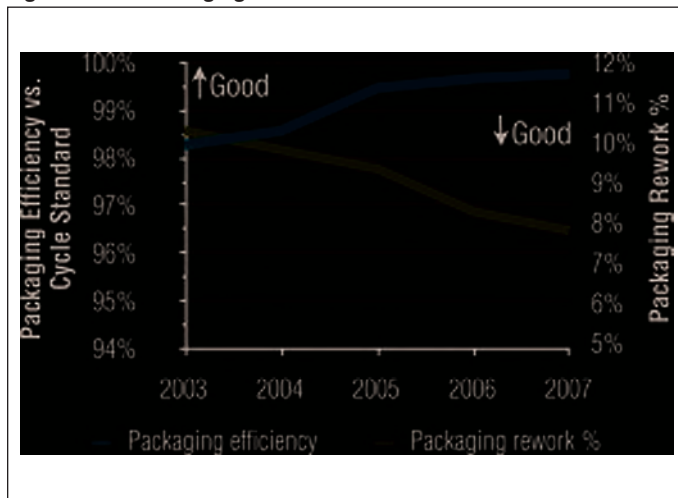**Figure 7.5-11 Packaging Process Effectiveness**

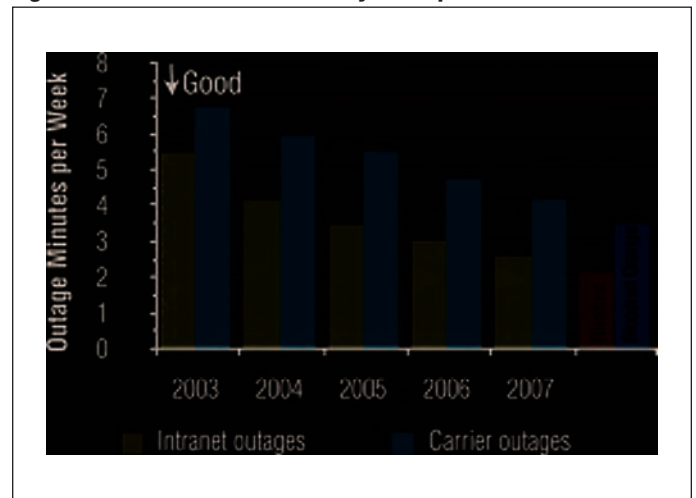

Figure 7.5-14 Intranet and Carrier System Uptime

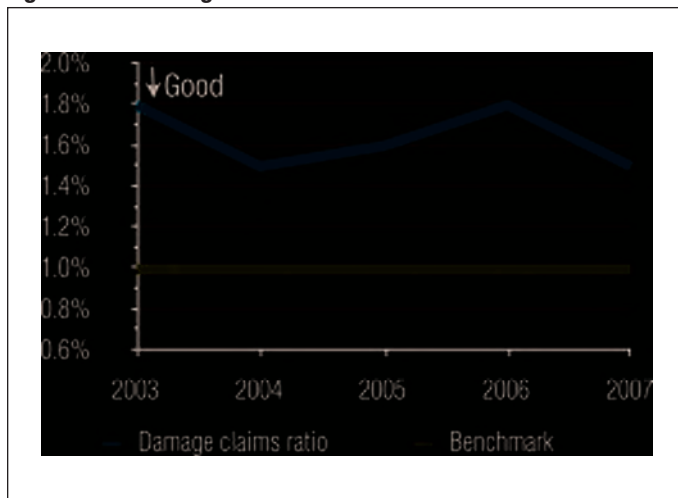**Figure 7.5-12 Damage Claims Ratio**

Figure 7.5-15 Help Desk Satisfaction
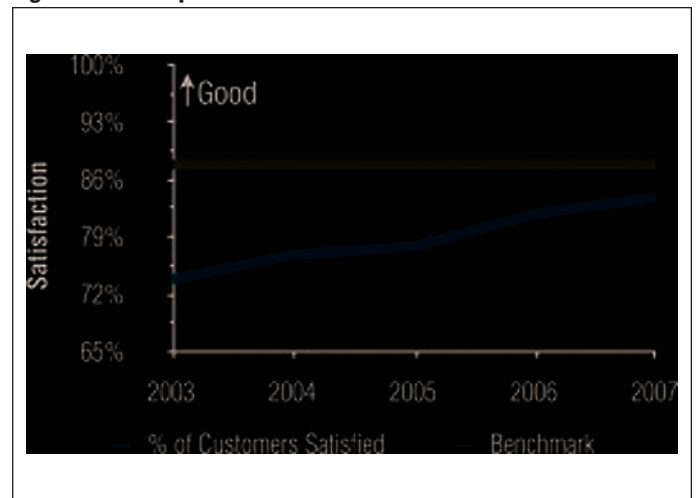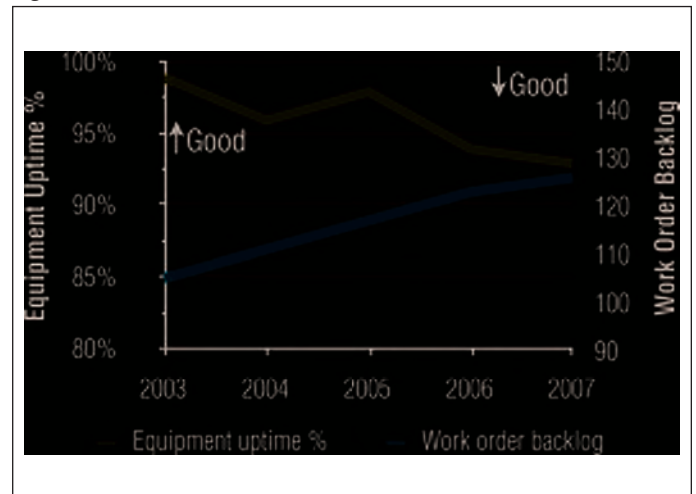

Figure 7.5-13 Product Quality: Defect and Return Rates


Figure 7.5-16 Maintenance Process Effectiveness

Novel Connect's Customer Service Team works with internal customers to quickly resolve hardware and software problems when these occur. Figure 7.5-15 indicates internal customer satisfaction rates (from virtual user surveys) with the service provided. The benchmark shown was obtained from the Help Desk Institute (HDI).

Maintenance process effectiveness (Figure 7.5-16) is primarily gauged by looking at equipment uptime percentages and the current backlog of preventive maintenance, emergency, and capital project work orders. In support of the PIP, a certain backlog of maintenance work orders is expected. The equipment uptime percentage shown in Figure 7.5-16 includes the scheduled downtime that is needed for line changeovers and

Figure 7.5-17 Call Center Process Effectiveness
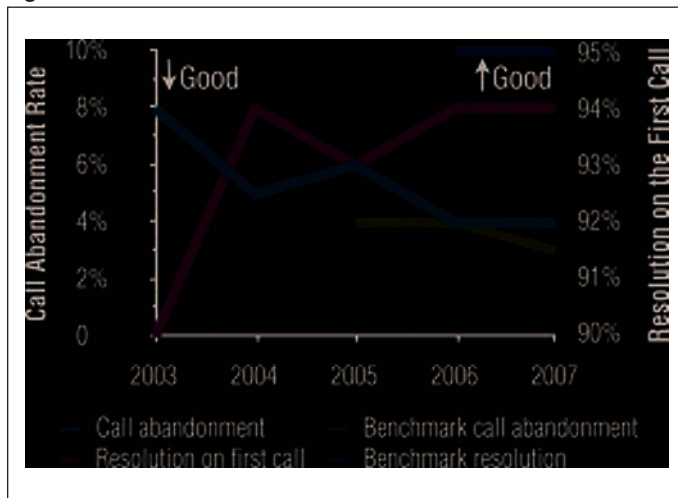
preventive maintenance; therefore, the uptime percentage is not expected to reach a level of 100 percent.

The call abandonment rate (Figure 7.5-17) is calculated from the time the call is answered. The company considers an abandonment rate of less than 3 to 4 percent as perfectly acceptable, as people abandon for many reasons, including an interruption or wrong number; Novel Connect's interest is to measure customer satisfaction to find out why people are hanging up. First-call resolution (Figure 7.5-17) measures whether an employee addresses the customer's need the first time he or she calls, thereby eliminating the need for the customer to follow up with a second call. The benchmarks are from Yellowbird Call Solutions, which provides benchmark data on average speed of answer, abandon rates, and first-call resolution in the customer care industry.

Novel Connect gauges the success of its PIP by trending the number of ideas that are submitted, the number that are implemented, and the number that are currently in backlog (Figure 7.5-18). As employees are expected to spend 10 percent of their time annually generating or working on new ideas, the rate of ideas submitted or implemented per employee, per year, is trended, as opposed to simply looking at the total number of ideas submitted or implemented. For planning purposes, and in recognition of the fact that all ideas cannot be implemented immediately, some level of backlog is expected and desired.

Figure 7.5-18 Process Improvement Effectiveness

Process Improvement	2003	2004	2005	2006	2007	Bench-mark
Ideas submitted per employee, per year	2.1	3.2	3.6	3.8	4.0	2.5
Ideas implemented per employee, per year	0.7	0.8	1.1	1.3	1.4	
Net idea backlog	128	131	132	140	150	

Novel Connect has realized success in obtaining higher levels of both submitted ideas and implemented improvements, while also keeping the number of ideas in backlog relatively stable. The benchmark rate of ideas submitted is based on a rate obtained from a recent Baldrige Award recipient.

7.6 Leadership Outcomes

7.6a(1) Figure 7.6-1 reflects the progress of Novel Connect's current strategy and action plans. All measures are reported elsewhere in Category 7 (see the "Reference" column). Novel Connect excels at managing projects, and these results demonstrate its accomplishment of action plans and strategic objectives over the last year; because action plans have changed over the years, trend data would not be meaningful.

Figure 7.6-1 Strategy and Action Plan Results

Objective	Current-Year Progress on Short-Term Action Plans: % Completed	Current-Year Progress on Long-Term Action Plans: % Completed	Reference
Profit	100	100	Figure 7.3-2
Customer satisfaction and market position	100	85	Figures 7.2-1, 7.2-11
Innovation, agility, and rapid response	100	80	Figures 7.2-2, 7.5-3
Value creation	89	75	Figure 7.5-14
Workforce satisfaction	100	60	Figure 7.4-2

7.6a(2) Figure 7.6-2 demonstrates Novel Connect's focus on ethics and trust in governance. Novel Connect does not track the number of tips called into the ethics hotline because this measure would not necessarily indicate more or fewer violations.

Figure 7.6-2 Ethics: Measures and Results

Measure	2005	2006	2007
Ethics hotline issues resolved within 14 days	100%	100%	100%
Ethics tips resulting in confirmed ethical violation (employees terminated in all cases)	2	1	0
Code of Ethical Compliance returned from employees, partners, and suppliers	100%	98%	100%
Trot Engage 14 survey: overall satisfaction (reflects trust in leaders) (question 4)	81%*	85%*	87%*
Trot Engage 14 survey: satisfaction with communication (question 5)	66%*	73%*	84%*
Survey of shareholder trust in BOD and senior leadership	N/A	N/A	91% (pilot)

These data show the percentage of employees who gave Novel Connect high ratings in the survey.

Instead, the company encourages that all issues be called in so that they may be investigated and resolved.

Figure 7.6-3 Trust in Leadership Results

Question	2007 Results
The Novel Connect BOD represents all shareholders.	86%
The Novel Connect BOD obtains external information to objectively establish CEO/President and senior leader compensation.	77%
The Novel Connect BOD communicates important issues to shareholders in a timely and objective manner.	91%
The Novel Connect BOD has policies in place to ensure that its members have no conflicts of interest.	81%

Figure 7.6-3 shows the initial results of several key items on the 2007 pilot survey measuring shareholders' trust in the BOD and the CEO/President. This survey is being expanded in 2008 to all shareholders.

7.6a(3) The company has had no qualified audit (opinion with reservations) in its history. Internal audit report findings require responses by the appropriate department within 14 days, with all issues resolved within 30 days. These targets have been met by Novel Connect since the inception of the Internal Audit Department function in 2001. The company does not track adherence to budget, because the SLT believes that departments may adhere to a budget by spending up to the budgeted amount; instead, all departments are encouraged to spend wisely. Leaders typically exercise strong control in this area.

7.6a(4) Regulatory and legal compliance by Novel Connect is depicted in Figure 7.6-4.

7.6a(5) Organizational citizenship is measured in many ways at Novel Connect, as shown in Figure 7.6-5.

Awards that indicate organizational citizenship (and reflect the core value of sustainability) are listed here; there are many more available on site at each pod:

- Ann Arbor Recycler of the Year: 2000, 2002, 2004, and 2006
- Berkeley Environmental Citizen of the Year: 2007 and 2008
- Rochester Area Conservation Award: 2003 through 2007

In addition, the following is a sampling of other recognitions that the company has received for social responsibility (a full listing is available on site):

- "We're Here" Award, bestowed by the American Society of Senior Persons, and the Corporate Citizen of the Year Award, bestowed by the National Rape and Crisis Prevention Association; both awards recognized Novel Connect for being the first company to offer the 911 fast-connect emergency calling feature
- Platinum Donor, Brain and Spinal Cord Injury Association of America
- Distinguished Honor for Emerging Engineers Initiative, Engineering Institute of America
- National Dubridge Safety Award: 2001, 2003, and 2004
- Environmental Citizen of the Year Award, Nevermore Association

Figure 7.6-4 Regulatory and Legal Compliance

Processes	2005	2006	2007
WTB accessibility	100%	100%	100%
OSHA lost workday injuries	0	1	0
EPA reduction in hazardous waste	314	299	244
SEC and SOX noncompliances	0	0	0
IPC-A-610 nonconformances	0	0	0
ISO 14001 nonconformances	0	0	0
HDI certification	100%	100%	100%
TL9000 and QuEST Forum certification	100%; 0 nonconform.	100%; 0 nonconform.	100%; 0 nonconform.
Go-Green/Grow-Green increase in waste recycled (pounds) (goal is zero waste)	20%	20%	20%
Electronic equipment recycled (industry standard is 20%)	32%	36%	37%

Figure 7.6-5 Organizational Citizenship Results

Processes	2003	2004	2005	2006	2007
Foundation contributions (in millions)	$24.1	$28	$36.4	$44.8	$47.9
Employees contributing at least 16 hours per year to nonprofit community organizations. Comparison: The most appropriate comparison found is to a recent Baldrige Award recipient with 8 hours per year per employee.	61%	68%	64%	76%	89%
Go-Green/Grow-Green increase in recycled materials and decrease in waste. The recycle target is an increase of at least 10% each year. Comparison: Very few companies have zero-waste goals, and comparison data are difficult to find in this early movement. The Nevermore Association tracks such activities but is not yet tracking verifiable data.	11%	9%	20%	20%	20%
Energy efficiency: Percentage of non-carbon-based energy used. Goal is 10% increase per year.	6%	6%	7%	9%	11%

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