Adventure Works Cycles

Vision/Scope

Adventure Works Cycles Application Project

Sales Automation and Web Site Enhancement

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Revision & Sign-off Sheet

Change Record

Date	Author	Version	Change Reference
9/24/02	Heidi Steen	1.1	Review Company information, Vision Statement and add Solution Concept
9/30/02	Heidi Steen	1.2	Add Solution Concept, first requirements
10/02/02	Heidi Steen	1.3	Add Use Case information, update Solution Concept & Requirements
10/15/02	Heidi Steen	2.0	Update requirements, add success criteria after third phase of user interviews

Reviewers

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Vision Statement

> Over the next 2 years, we will double last year's sales of bicycle products, while reducing costs and increasing customer satisfaction.

Opportunity Statement

Despite efforts by the sales staff to connect with customers, customer satisfaction of Adventure Works Cycles customers seems to be declining. With the rising popularity of the Internet, customers expect to gather information, place orders, and track deliveries without making direct contact with the company. Coupled with this, sales representatives are not spending enough much time driving big sales because they lack clear information that can help them prioritize sales activity. Sales staff complain that the current decision support system hampers their ability to plan, execute, and track the sales and marketing strategy, and that current systems are not delivering information in the correct form. For example, the entire price list is downloaded when a pricing update is requested. Sales staff download lists only to discover that the changes do not affect their area or product. Finally, because regional sales teams are located throughout North America, Europe, and Asia, the need for international support, including multiple languages, date and time data types, and currency support is critical.

Scope

From an end-user perspective, the Adventure Works Cycles Application Project consists of two functional elements: an enhanced Web site and a sales force automation system.

Web Site Enhancement

An enhanced Web site is to be developed for Adventure Works Cycles customers. To increase their customer base and provide additional functionality for their existing customers, Adventure Works Cycles is expanding their Internet site to include the following features:

- The customer will be able to browse, add products to a shopping cart, choose shipping options, provide payment, and check out.
- By using their own account, sales staff will be able to place orders through the Web site with the same functionality that is provided to the customer. In addition, sales staff will be able to apply discounts in accord with the current sales policy.

- An order confirmation will automatically be sent to the customer. The order will be added to the fulfillment center's work to process. Automated e-mail messages will inform the customer of any delays.
- The customer will be able to register and thereafter use a secure User ID and password to place future orders or check the status of existing orders.
- Improved search capabilities of product information will be available, along with ability to access explicit sections of engineering product specifications.
- Prices and order information will be expressible in international currency and date/time formats.

Sales Force Automation

A Sales Force Automation system will be developed for Adventure Works Cycles sales representatives that will consist of a Microsoft® Windows®-based application to be used for customer management and order placement. Sales representatives can use the external Web site by using a special user account to create orders when they cannot do so by using the Windows-based application.

The Windows-based application will include the following features:

- Sales representatives will receive data tailored for their selection criteria (region, promotions, among others).
- Sales managers will receive data for their team members as well as their own.
- Sales staff will be able to create their own queries through a user-focused interface to analyze sales totals, percentages, or customer summary data.
- Devices running Microsoft Windows CE can be used to synchronize an order with a sales laptop and to obtain a customer's signature.
- Replication will occur in the background, automatically upon connection and also at the user's request, with minimal detrimental impact to performance.

Both of these areas of functionality will be delivered as the first version of the Adventure Works Cycles application. Functionality is described in more detail later in this document.

Out of Scope

The following functions are considered out of scope for Version 1 of the Adventure Works Cycles application. Versions 2.0 and 3.0 will address items not in scope, and those deemed not feasible during V1.0.

Function	Comment	Version
Accessibility to both employee reviews and resumés of prospective employees	Required by Human Resources	2
Forecasting mechanisms to track	Required by Human Resources	3

employee numbers and plan for changes in work compensation and benefits		
Visibility into work orders and inventory data	Required by production, to ease scheduling problems that have caused inefficiencies between assembly areas and increases in rejected parts	2
Personalization of Web site by customer		2
Print-friendly version of shopping cart		3
Integration with Contact Management software used in Dallas office	Not compliant with remainder of sales team	2
Connection to third-party OLAP applications		3
Sales management enhancements for forecast definition and tracking		2
Electronic Data Interchange (EDI) system between purchasing department and their vendors	Aimed to reduce costs and time in the purchasing process	3

Goal

This section presents a conceptual overview of the solution, and then provides an introduction to its requirements.

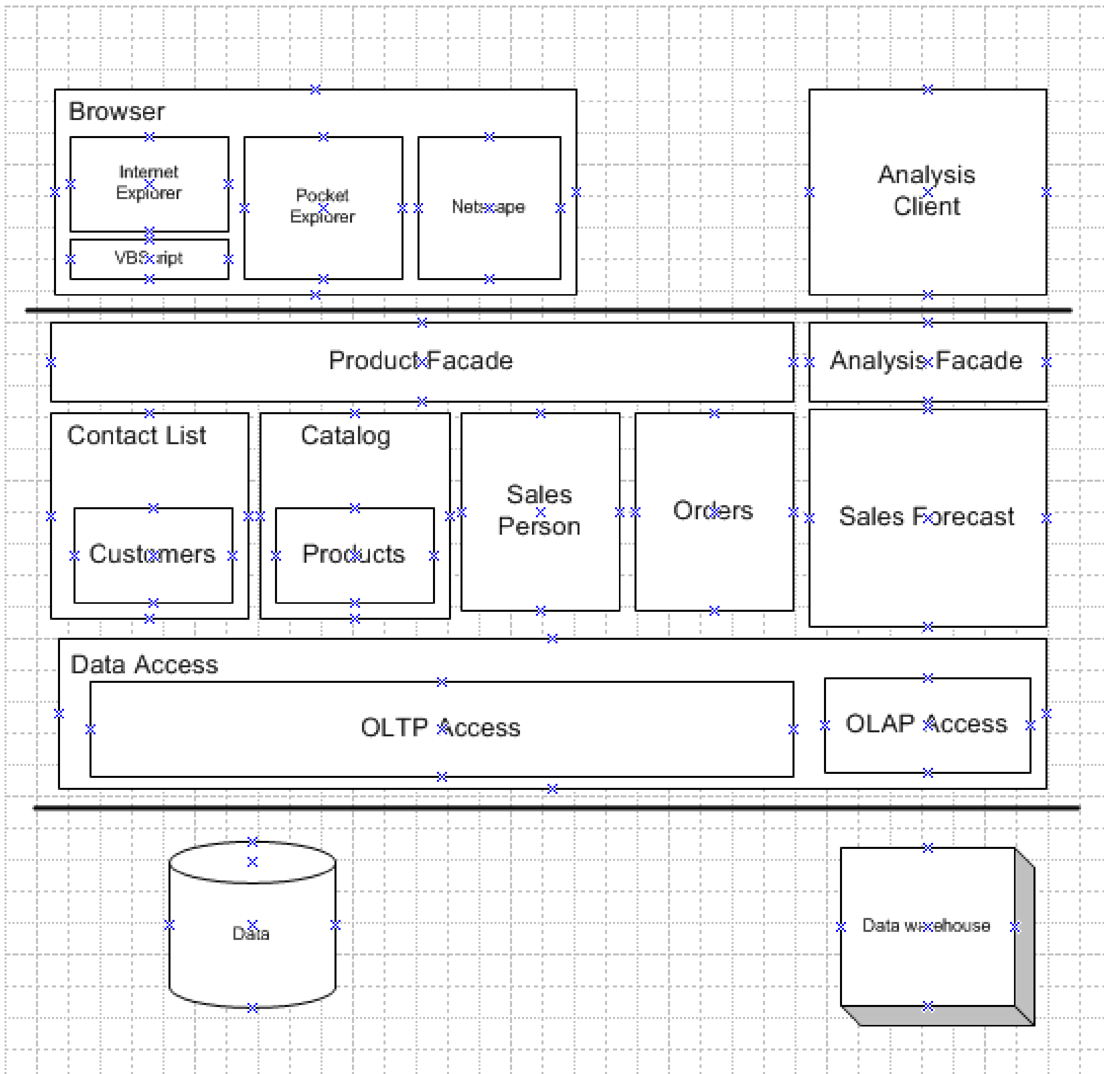
Solution Concept

The Adventure Works Cycles application consists of:

- **Enhancements to external Web site**: expand the current read-only catalog Web site to include online ordering and order tracking, XML support of catalog browsing and product specifications, and international currency and character support.
- **Sales Force Automation**: provide customer and product analysis capabilities (best customer, best product, developing issues) that can be delivered by means of a desktop computer, mobile device, and laptop. Provide international currency and character support, personalizable data streams, and opportunity management.

Part of the solution will involve converting data from Microsoft Word documents to the Data Warehouse to allow customer segmentation and profiling. Customer documents will then be generated in the necessary tools (Word, Microsoft Excel, Microsoft PowerPoint®) by using XML to maintain keyword references and other tags. XML will also support the presentation of data based on customer country/language. Prices and order information will be expressible in international currency and date/time formats.

The following diagram describes the proposed solution architecture at a high level.



User Profiles

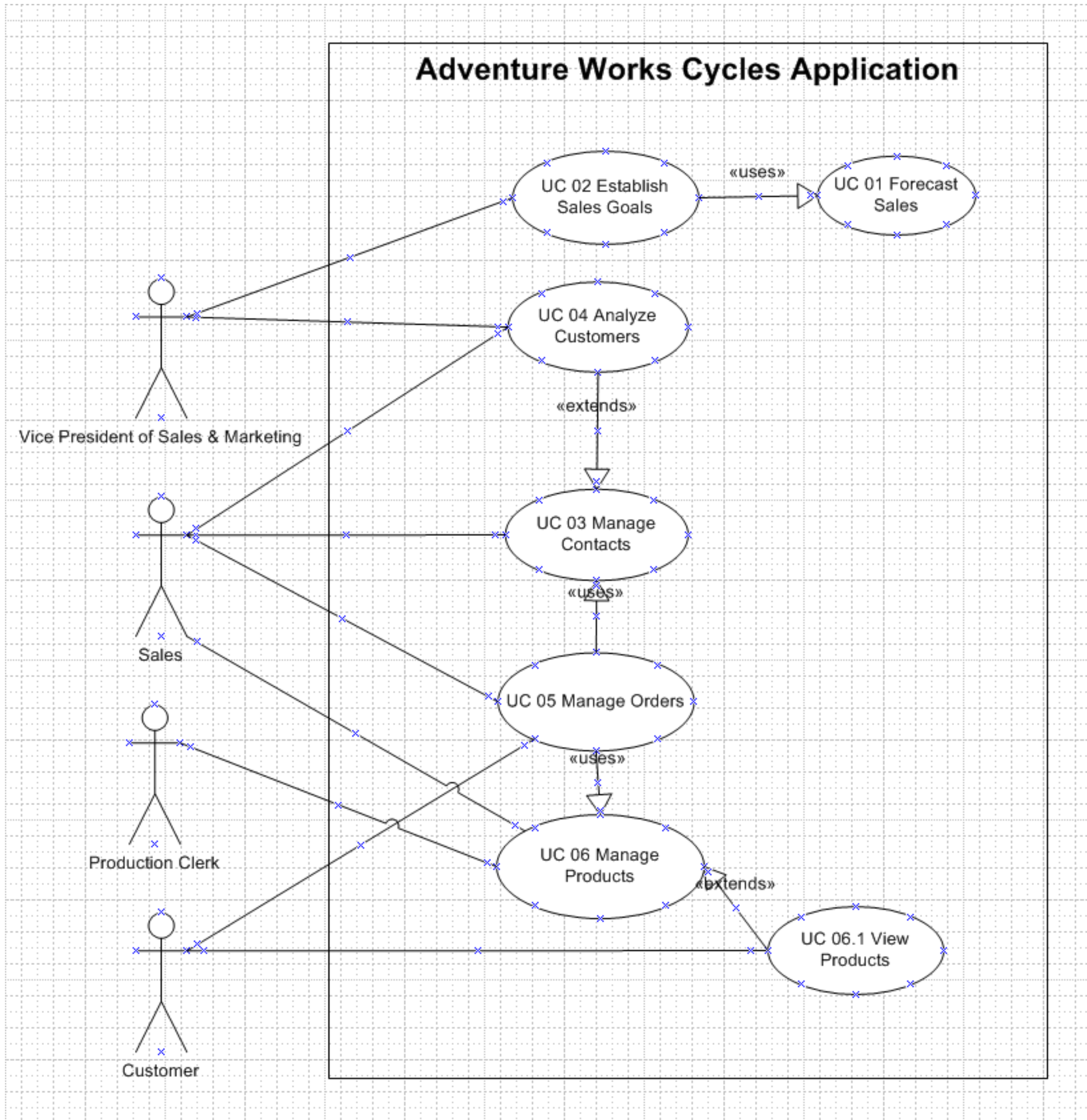
The following user types are expected for the Adventure Works Cycles application:

User	Brief Description of Use Actions
Sales Representative	Downloads and uploads customer and order information, which affects accounting, inventory and product data. View customer and product data as described in metrics, track orders and deliveries.

Sales Manager	All sales representative use actions, and management reports, quota establishment, region reporting and adjustment.
Customer	Browse and order products on line, view and print specifications, track orders.
Production Clerk	Create and adjust product catalog data, view and print inventory reports, browse products on line, view and print specifications.

Usage Summary

Adventure Works Cycles Application Version 1.0 will address the following use cases. The complete usage scenarios will be completed during the information-gathering process. Use cases will be created and prioritized. Selected use cases will be expanded into usage scenarios and features that are derived from both use cases and the usage scenarios, as represented in the following diagram:



Requirements Summary

The following preliminary lists are based on initial interviews, and will be developed fully during use case definition.

Business Requirements

The business goal for the application is to support an increase the company's customer base and provide additional functionality for existing customers. Business requirements are discussed in the Scope section, with the following additional detail:

- Sales representatives need a method to store and access sales opportunity data, and when a sale is generated, convert some or all of the information into a sales order without re-entering information.

- Web customers should be able to order products and product information, including the detailed specification.
- Each sales representative should receive customer and sales data pertinent only to them.
- The production clerk should be able to enter or update product information in one interface only, with all necessary product information being received by sales staff and web customer.
- Each sales manager must receive his or her customer and appointment data plus detailed and rollup information for each sales representative on his or her team.
- The application should support the capability to pilot new promotions and programs on a multinational basis.
-

The sales staff wants to improve their current ability to analyze their customers. In particular, they want to focus on identifying their best customers and building long-term relationships within that base. To enable them to accomplish this goal, they want to extract meaningful data that easily answers the following questions:

- What are the early warning signs of problems?
- Who are my best customers across product lines?
- With whom do I focus my efforts for building a long-term relationship?
- What are my customers' issues as groups?
- Geographically, where are my best customers?
- What products are my customers buying and at what rate?

User Requirements

User requirements are categorized by user type.

Sales Staff (Representatives and Managers)

- View the data in various ways, for example:
    - Customers who are the top buyers of specific models
    - Best customers based on criteria to be determined
    - Best customers based on geographical analysis
    - Drops in a customer's sales
- Store multilingual and multiregional information in the database rather than relying on the sales staff to translate the information
- Identify which product prices have been modified, especially on current orders in progress
- Use opportunity rules, which are statements that help the sales representative convert an opportunity into a sale
- Add third-party data sources and financial evaluation tools
- Identify where promotions and programs would be the most beneficial

- Apply discounts to customer orders:
    - Sales representatives can offer discounts up to 15 percent, or up to 20 percent with authorization.
    - Sales managers can offer discounts up to 20 percent
- Enable capture, analysis, and sharing of data about a customer across the company

- Use forecasts to establish sales goals
- Allow all staff to view all contacts, but allow each contact to be assigned to a sales representative

Web Customer

- View product catalog by browsing
- Request more literature on our products
- Sort product by price, name, part number, associated assembly (specific bike), date of production, weight, depth, height, material composition
- Add product to shopping cart
- Choose shipping options, including multiple addresses
- Check out and provide payment
- Track order, determine status and location of fulfillment
- Find the closest sales office

Production Clerk

- Update product details, including price, photo, and description
- Add, delete, and update product specifications

Operational Requirements

The following requirements provide a high-level view of how the system will run:

- No more than a 5 percent degradation in average page response is allowed with each 100 concurrent users added to the system.
- Processor usage should not exceed 80 percent during “spikes” of 1000 concurrent users.
- Issues arising when combining data from multiple sites should be flagged and resolved in an appropriate manner.
- Backups will occur incrementally throughout the day.
- A full weekly backup is required to WORM drives.
- Ensure that information is easy to access either onsite or on the Web, and meaningful for the sales representative and the company.
- Minimize the technical knowledge that sales and marketing staff need to access the data, generate ad hoc queries, track promotions, and view customer segmentation information.

- Any change to information must be reflected immediately on the Web site, and the changes must be propagated to the search engine so that employees that perform searches see this new information.
- The application should work with the existing communications and networking infrastructure.
- The application should deploy with a minimum of additional operational processes, manual or otherwise.

System Requirements

These are additional constraints from a system perspective:

- All offices must have complete local instances of the data.
- Sales automation solution must integrate with the existing calendaring and contact management capabilities of Microsoft Outlook®.
- The administrator must be able to monitor everything from the IT department.
- The information must be accessible by everyone in the company.

Success Criteria

To determine the success of this project, the following metrics can be quantified and used to analyze success factors.

Sales Automation

- **Problem customer identification**. Ability to identify top 10 developing problem customers by sales representative.
- **Identification of best customers across product lines and regions**. All customers can be sorted by the factors (to be determined) that rank them qualitatively. Variable sorts and rankings can be chosen by the sales representative.
- **Identification of issues across groups**. All customers can be sorted by the issues (to be determined) within group categories that can be updated. Variable sorts and rankings can be chosen by the sales representative or other user.
- **Analysis of quantities and rates of products**. Products can be sorted by the quantity and dates sold. Variable sorts and rankings can be chosen by the user.

Web Site Enhancements

- All customers/employees can order and track any product online.
- Product literature is searchable by part number, partial part description, date of stocking, quantity, assembly association, vendor and physical dimensions, or materials.
- Explicit sections of engineering product specifications are in XML format.
- International currency and character sets are supported in both the catalog and the purchasing process for a specified list of languages.

- Departmental site information is visible/searchable (search criteria to be determined) across the following departments: Purchasing, Sales, Customer Service, Accounting, Inventory Management, Engineering, Marketing and Product Manufacturing.
- Changes to the information described above are reflected immediately.