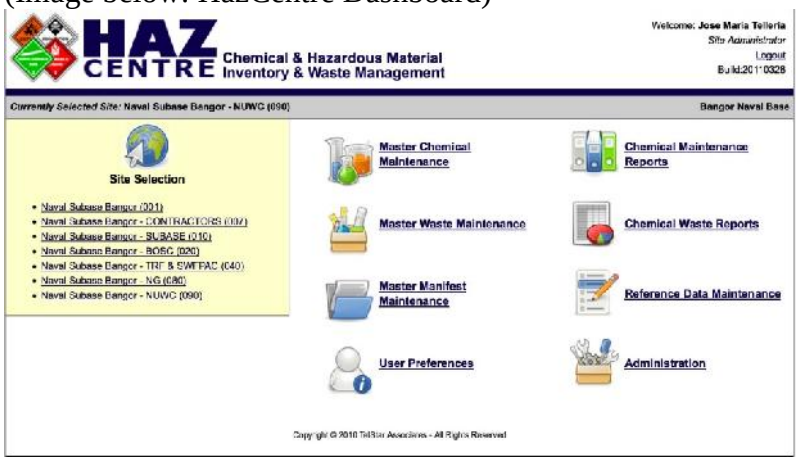
Overview

TelStar's (HazCentre) is an enterprise-wide Environmental, Health, and Safety (EHS) Information Management record-keeping and reporting solution that helps clients achieve and maintain internal / external regulatory commitment compliance. This task is made easier by standardizing and simplifying the storage of information.

(Image below: HazCentre Dashboard)



The functional suites that HazCentre offers is the most comprehensive in the industry, all built to run on the same solid base. Features include:

- Simplified data entry and import and export utilities
- Easy integration with enterprise resource planning, warehouse management, purchasing, personnel, laboratory information systems, and other enterprise systems
- "Enter-once/use-anywhere" architecture for increased productivity and data integrity.
- Site and Centralized Reporting
- Allow entry of Material Safety Data used for data retrieval and calculations
- Allow Storage of Material Safety Data Sheet for quick retrieval
- Unlimited Database – Users can track and record an unlimited number of items
- On-Demand Service and Support
- Customizable EHS Inventory Solution

The HazCentre database has been indexed extensively and includes reports that easily retrieve data using these indices. The system stores a comprehensive description of hazardous materials and usage, storage, movement, and disposal. HazCentre supports multiple facilities, divisions, and companies while providing corporate roll-up reports. Flexible reports and inquiries and the HazCentre Dashboard enable managers to track internal and external tasks, and analyze and evaluate data for well-informed decisions.

Currently, remote access to HazCentre is typically through remote desktop technology. In addition, some functions are available with a web interface.

HazCentre System Security allows the system administrator to define different group access to functionality (full, read only or no access) based on roles and/responsibilities and assigned the users to a specific group.

HazCentre unique corporate organization structure supports the identification of multiple companies and organizations operating within a single facility or site. Ownership of the material can either be directly assigned to a responsible party (company/Site), and or identified by organizational unit, who operates/controls specific locations/equipment on a given site or facility.

Agency specific reporting codes are stored by State/Agency and are referenced when state specific reports and/or submissions are generated.

Users authorized to sign reports can be associated to the reports. A similar mechanism is used for authorized manifest signatures. Import files can be loaded manually on demand, in batch mode live interface, live transfer via Unix socket load, live ODBC transfer to HazCentre holding table, or automated import/export of data audited in a database.

The most common mobile device is barcode reader, which is used to track drum movement and consolidation. Use of other mobile device is supported providing the mobile device can offload an ASCII file.

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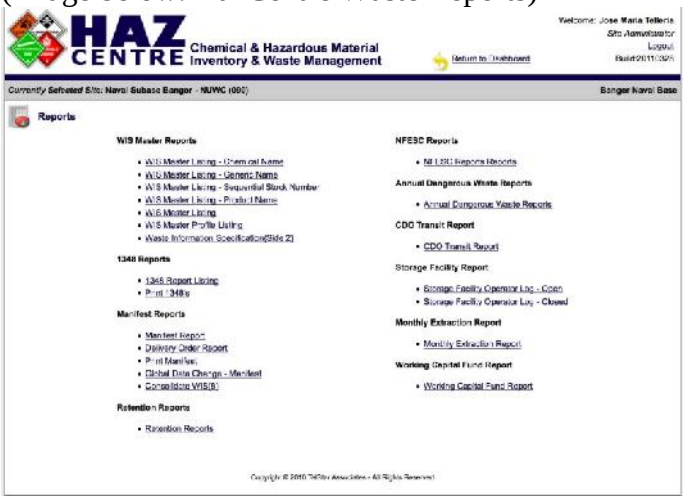
HazCentre Waste Management

Waste Management functionality:

- Characterizes waste based on analytical samples
- Tracks on-site generation, storage, and movement of waste
- Supports tracking and management of consolidated waste streams
- Issues warning and alerts based on type of waste and storage locations through reports
- Creates metric reports based on point of generation
- Identifies treatment, disposal, and recycling options and costs
- Tracks off-site transportation, treatment, and disposal
- Generates mandatory regulatory reports

(Image below: HazCentre Waste Reports)



HazCentre Waste Management Tracking

This feature provides comprehensive cradle-to-grave of both RCRA Hazardous waste, medical, nuclear, state regulated waste, industrial waste, and non-hazardous waste.

Functions are provided to identify and categorize waste by type, waste stream and source of origin. Tools are provided to track waste container's location, contents, and quantity, and flag container expiration dates.

HazCentre generates and prints manifests. It characterizes the waste based on analytical samples, tracks off-site transportation, treatment and disposal locations, and tracks treatment and disposal options and costs. It also provides the ability to generate state specific waste reports. It can be used in conjunction with the HazCentre Management Suite to seamlessly follow the transition between feedstock and waste materials.

The waste profile IDs assigned by the TSD, drums/containers, and waste shipments.

The system tracks internal waste by waste stream ID. Waste can be tracked either by container (eg. drum, bin, tank) or bulk movement.

Offsite wastes are tracked by the waste profile ID assigned by the TSD to which the material will be shipped.

Reports total waste quantities by hazardous or non-hazardous and can be configured to total by other waste types.

Waste Shipment & Disposal
This functionality provides tools to manage and track the shipment disposal of waste streams and recyclable materials. It maintains critical information regarding the transportation, disposal, and recycling vendors your company / Site uses.

Waste Shipment & Disposal generates:

- Federal Uniform Manifest and Continuation Sheets
- Land Disposal Restriction (LDR),

You can generate shipment manifests based assigned Waste Approval numbers, making shipment or line item adjustments. The software tracks both bulk and containerized shipments, and supports tracking by container ID.
Waste Shipment & Disposal documents the costs associated with handling or disposal of each waste type. Costs may be tracked by standard prices issued by each vendor, and/or by unique pricing issued under special contracts or purchasing agreements. Reports show total volume of waste handled by each vendor, waste type, and the time period involved. You may sort reports by facility, TSD, or date range. As bulk shipment or waste containers are transported off-site, this functionality tracks movement documented in manifests generated by the system. Recorded information includes unique manifest number, date of issue, the companies involved in transportation and disposal of the waste, and the containers identified on the manifest.

The HazCentre Waste Management/Tracking
This feature offers comprehensive cradle-to-grave waste monitoring capabilities. It tracks all types of waste such as hazardous, universal, PCB, and asbestos to paper, trash and cafeteria waste. The software allows customers to stay on top of container storage deadlines, quickly create a variety of shipping documents, and generate internal and regulatory waste reports.

Container Tracking
HazCentre creates new container records using system-generated IDs based on a client defined numbering system. One or multiple containers can be created at a time, along with the appropriate labels based on client requirements. HazCentre tracks the dates of the container and any waste it contains. The storage locations within the facility are assigned time limits for container storage. Containers approaching or overdue for disposal are identified on reports or generate alerts. HazCentre tracks the quantities of the container by waste stream. When consolidating containers, it takes on the date of the oldest waste stream.

Container history reports list where a container has been stored within the facility and all the waste that has been in the container even if it was consolidated or pumped into another container, or shipped off site. An existing Pick Up report was designed for staff to identify containers that are nearing the expiration date. Location/waste stream/container types are included on the report so the staff can schedule pick-ups the most efficient way. The report can be scheduled to run on a pre-defined schedule (daily, hourly, etc.).

Radioactive Materials Tracking (RMT)
The Material Tracking feature allows seamless tracking of radioactive materials and the transition between feedstock and waste materials. By following a material's movement from receipt to final disposal, users track when the material was brought into the facility, where it was stored before use, the location within the facility where it was used, and where it was disposed.

HazCentre currently totals quantities within consolidated containers at a waste stream level.

TelStar has helped clients develop and deploy bar code scanner interfaces. In addition, TelStar also has experience with many mobile device technologies.

Waste Profiles
HazCentre has been used by TSDs to track waste profiles and incoming containers from delivery through disposal as well as tracking return of manifests. HazCentre is also used by different types of waste generators. For these clients HazCentre stores and tracks waste streams and approvals. They also use HazCentre along with bar code readers to track hazardous and non-hazardous waste containers' locations and contents. HazCentre identifies containers ready to ship based on expiration date to a particular TSD. It then generates and prints the manifest. Our clients also use HazCentre to generate their biennial report and corporate waste minimization reports, along with other internal waste reports. HazCentre has imported waste data from resource managers managing the waste at particular customer facilities.

TelStar has experience writing interfaces to TSD waste profile information.

Shipping
As the bulk or waste containers are shipped off-site, HazCentre tracks the movement documented on manifests generated by the system. The system records the unique manifest number, the date the manifest was issued, the companies involved in transportation and disposal of the waste, and the containers included on the manifest. Selecting hazardous versus non-hazardous waste, and the TSD filters the containers available for shipment. By selecting container IDs, HazCentre automatically carries to the manifest the waste codes, volumes, and shipping descriptions assigned to the associated waste streams/profiles. HazCentre generates the Federal Uniform Manifest and Continuation Sheets. Additional reports about the manifest and contents are available.

The Reportable Quantity (RQ) is stored at the waste stream level. A report can be written that lists containers that have reached the requirement.

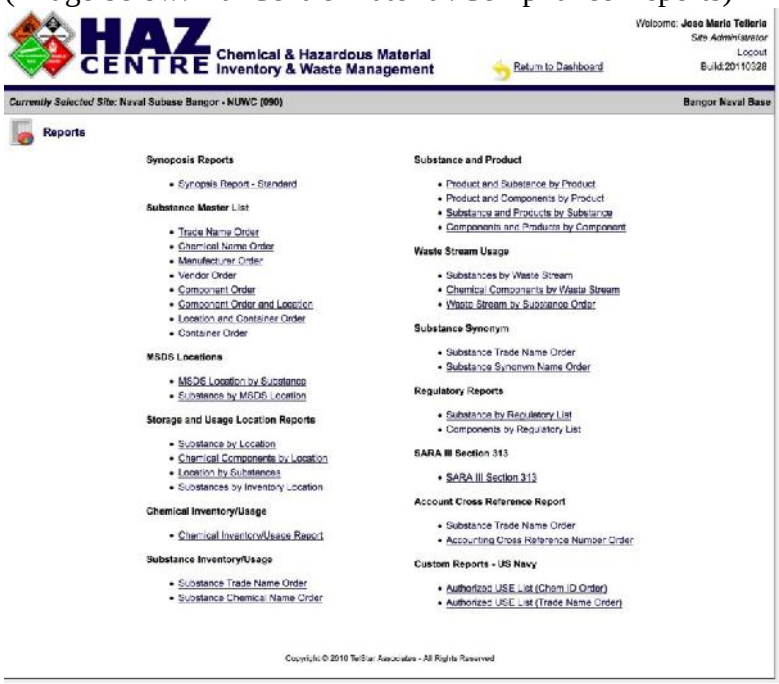
Cost Tracking
Different types of disposal treatments and the costs by unit can be stored and associated to waste profiles. Flat rate charges can also be stored for both transporters and TSDs.

TelStar's experience with customers is each one needs cost reports specific to their workflow and business requirements, so although the database has fields to store cost information.

Chemical Inventory Tracking

Chemical Inventory Tracking feature allows the user to track the movement of chemicals from the time of receipt through final disposition. Materials can be monitored through bulk transactions, which account for mass movement without regard to individual containers, or through individual container movements. For the latter, HazCentre supports container characteristic information, such as identifying number, material type, and size. Data can be entered manually, or uploaded from other data capture systems such as RFID, bar code, ERP, or purchasing systems.

(Image below: HazCentre Material/Compliance Reports)



The application allows for tracking the movement of materials (or containers) from one container to another, as is required to track movement. The alphanumeric identifier that tags each container of waste is compatible with bar coding schemes.

The entering of chemical data populates various tables within the system, enabling the user to generate a wide variety of inventory management and regulatory reports.

To track products leaving the facility, the user can build an unlimited number of endpoint codes. For SARA Form R reporting purposes, each endpoint code is assigned a category type. The category type governs how emissions, effluents, or wastes are tracked and reported for regulatory purposes. By selecting the proper endpoint code, the user is able to track process streams (feedstock) that become waste from the point of generation and storage, through final on-site or off-site disposition.

Integrated

Using Chemical Inventory Tracking in conjunction with Waste Management/Tracking allows the user to maintain a true comprehensive database of all storage, movement, treatment, and disposal information. Alternatively, for clients who have not yet implemented a full material tracking system, HazCentre Chemical Inventory Tracking feature may be used without input from the inventory tracking portions of the systems.

Comprehensive
A series of material balance reports for entire facilities, specific locations, and equipment or discharge points are provided. Functions are provided to allow the user to monitor chemical inventory and adjust or reconcile discrepancies.

The Roll-Up function uses raw data from the inventory transaction files to compute the actual daily, monthly, and annual quantities of material in storage, and the distribution of various ingredients within these materials. A series of reports are available that describe both purchasing and usage data, including the quantities of materials and their ingredients by location and type.
TelStar's relational database system links chemical inventory information allowing automatic generation of standard Tier II and Form R/A reports using the SARA Tier and Form R features.

HazCentre maintains lists of materials that have "Threshold Planning Limits", such as 302 Materials; the "Ingredient Report" can be sorted by these materials. Inventory records can also be compared to the list to find out which materials in inventory must be reported.

Inventory records can be tracked at any level of the company structure. The related reports allow the user to sort the data by the Facility /Site. This design provides the user with maximum flexibility in defining the organizational structure of the company and the physical layout of the facilities, as well as how the chemicals will be tracked. For example, locations may be as broad as a warehouse or as specific as a shelf within a storage room. Since locations are tied to the movement of inventory, their definitions may be expressly tailored for each facility to maintain the desired level of detail.

Detail Oriented
A series of reports are included that allow the user to retrieve both current and historic records regarding the quantity of products used or stored in a particular location, or quantities used by a specific department. Similar reports are available on an ingredient bases. The "Container Inventory" reports provide similar accounting of containers by location. The "Container History" and "Container Inventory" reports allow the user to track material transferred to containers and the method by which materials are sub-divided and distributed.

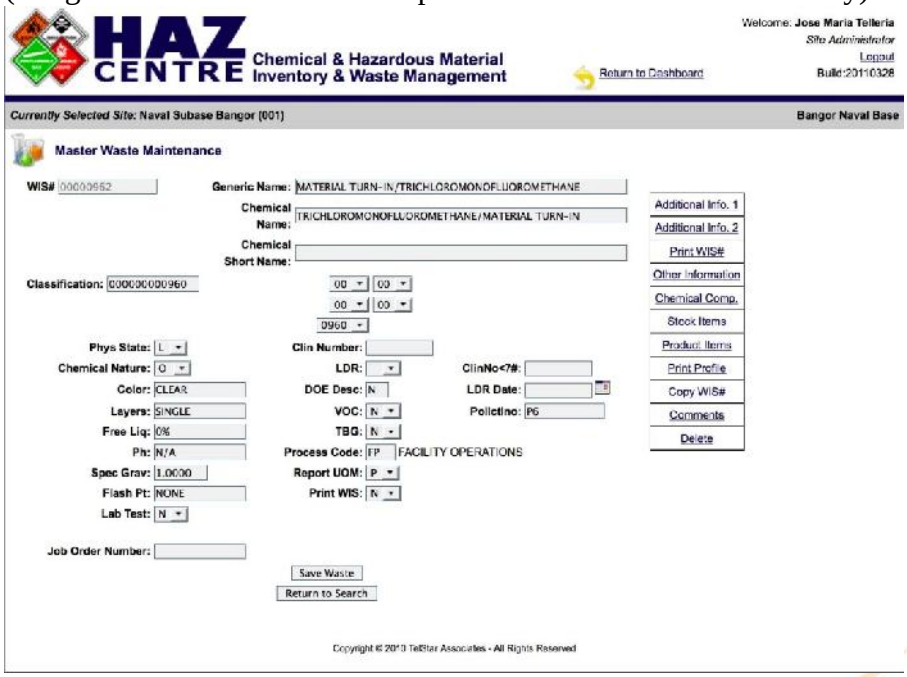
Data Import and Conversation

Chemical ingredient data from other systems can be imported to HazCentre if it is in delimited ASCII file format. TelStar also offers custom conversion programming services.

General System/Database Functions and Interfaces

HazCentre security allows the system administrator to define different groups of access based on job responsibility and assign them to user names.

(Image below: HazCentre Example of manual Waste Stream Entry)



Customer Support Service and System Upgrades
Implementation, Transition, and Maintenance

TelStar offers Annual Product Support Plans (detailed under Customer Support Service and System Upgrades). Part of the plan is our Help Desk, staffed by highly qualified employees that answer customer's software questions. TelStar Project Managers maintain lists of product enhancement requests from clients. This list is consulted to determine updates to include in new releases. Updates to standard reports are often included. If a customer has a report request specific to their workflow or needs a report changed before a scheduled release; these are provided on a custom basis. Existing report filters allow customers to narrow down report results, and the ability to export reports to Microsoft Excel for additional data manipulation, along with the ad hoc report capabilities of Dashboard, often meet customer requirements for changes in standard reports.

TelStar often recommends and has helped clients with pilots and phased implementation, especially when customers have more than one facility, type of data to manage, or different legacy systems to convert. Both options have benefits. A pilot program allows real-world use on a small scale to identify and correct any workflow issues before training a larger group of users. A phased approach involves fewer client staff to be involved in implementation meetings at the same time, freeing up staff for other tasks. Because of the nature of a relational database, data entered in the first phase such as facility information, can be used by subsequent phases so they proceed faster.

Periodic downloads of data are provided as part of TelStar's hosted application solution. Some of TelStar's clients have used HazCentre for over 15 years, having migrated from the original character version of HazCentre, to GUI, to browser-based, along with upgrading their server hardware and operating systems. TelStar's hosted data center has also upgraded server hardware and software since it opened it 1995. Upgrades to HazCentre Software and servers are included in the annual product support plan.

Data Integrity

HazCentre is an EHS regulatory repository. As such, it is usually the receiver of data from many other types of business systems including data captured by internal enterprise resource planning (ERP) and human resource systems, processed data extracted from shop floor, process control and continuous equipment monitoring (CEM) systems, and data provided by third parties such as chemical suppliers, waste management, laboratories, and insurance underwriters. Since it is used to generate a wide range of compliance reports, it must establish, validate, and retain the relationships between data supplied by this wide range of systems. Because of its regulatory nature, data stored in the HazCentre repository is also typically scrutinized more closely over an extended period of time. This means that HazCentre must not only store and retain historic data, but also validate the relationship between the various files.

Data entry screens have numerous checks to ensure data manually entered is valid. These checks include:

- accepting only alpha characters in text fields and numeric values in number fields,
- validating date formats,
- offering drop down tables to select valid values,
- displaying error if user tries to leave a mandatory fields blank or when leaving the record.

The determination of which HazCentre fields will be populated, what data sources will be used, and whether “alias” identifiers will be needed, are typically decided during this initial implementation phase.

The communication protocols, file format, and validation criteria are then made so the interface specifications can be developed. These specifications are written in a manner such that the responsible parties can use them:

- building the data extract/transfer routines,
- developing the data loaders, and
- maintaining the interface.

Interface test plans and test protocols are also developed at this time. Representative sets of test data are created, and the test platform and database loaded.

Task 1: Interface Procedures
Much of the data mapping work should be performed during the preparation of the conversion specification work. As part of this task, the validity of those mappings is reviewed and modified as needed.

The interface specifications dictate the format of the extraction files needed from passive data exchanges. The specifications define data preparation steps, and data validation procedures for creating and modifying records. The procedure for creating primary and foreign keys, and the field indices, if required, are established. The specifications define the type and nature of the log files, error reports, notification messages, and interface protocols.

Task 2: Development
The specifications are then turned over to the customer and appropriate data source providers so they can build the data extraction routines. Each provider is asked to include sample sets of data so that the data extracts can be reviewed in order to:

- Identify erroneous or missing data elements;
- Assign naming conventions for exported data fields and file names to avoid confusion during validation and migration procedures;
- Develop the validation criteria for the subsequent data cleanup operations; and
- Develop error-correction procedures and responsibilities; including how to decide which conflicting values of redundant data will be used.

Any additional programming hooks required for reformatting, renaming, validating, or substituting fields in the data extract files are created.

Task 3: Testing
Once the system is configured, the sample data extract files are created and tested. The programs, control files and error report are adjusted to conform to the customer's workflow, and retested. Once signoff is obtained, routine scheduled loading of the interface is tested in the pilot system. Additional adjustments are made if required, and then it is turned over to a production mode.

Annual Product Support Plan

In the EHS field, legislation and regulations are constantly changing. TelStar helps our customers stay abreast of the most current regulations. TelStar customers are maintained at a state-of-the-art level in the HazCentre field by receiving product updates through the Annual Product Support Plan.

TelStar's offers complete support for all TelStar products. If complete answers to customer questions are not available in the product documentation, standard telephone support is provided from our Idaho Falls, Idaho office, Monday through Friday, 8:30 am to 5:30 PM Mountain Standard Time, except holidays, although other arrangements can be made for customers in different time zones. The combination of trained users at the customer facility and available telephone support from TelStar is the most cost-effective way to operate HazCentre.

Plan Components

Product Updates - TelStar's customers request changes, updates and enhancements to our standard products in response to their changing EHS information management needs. TelStar introduces product updates and new versions containing these updates periodically. Each customer benefits by receiving and implementing these updates to maintain their systems at the highest level.

Telephone Support Service - TelStar maintains a Customer Support Department staffed by people who have extensive knowledge of our entire product line. In many cases they are able to answer operational questions on the spot to solve a user problem. In other cases it is necessary for them to thoroughly research the problem a user is experiencing and obtain assistance from other members of our technical staff. In these cases our support staff has the goal to respond to all inquiries within 24 hours.
Note: Only users that have completed TelStar's product training are eligible for the Telephone Support Service.

Receiving Updates
Updates are available to all customers who have active contracts. TelStar notifies such customers at the time an update is available. TelStar schedules a mutually convenient time to apply the updates for hosted applications.

Performance Problems
Known software performance problems that are non-critical to the performance of the system and are functionality deficiencies will be corrected by TelStar by the time of the next release at the very latest.

Any identified problem in the customer's critical path is corrected as soon as possible; generally within 48 hours but no later than 14 days. Mission critical problems must be identified as such and should be provided in writing.

Product Release History/Future Plans
HazCentre is constantly under development to add new functions for our customers, often driven by regulatory changes but also based on customer input. In the past, TelStar has averaged a patch 4 times per year with a new version released on average of every 3 years. Depending on the HazCentre features an individual customer uses, these enhancements may or may not be applicable to them.

Training
TelStar offers two types levels of training:
Casual User Training –
Casual users receive standard, hands-on training on the specific features of the database system they will use regularly. User receive intensive, hands-on training on all aspects of the database system that will use regularly. For this reason, each class is limited to six students per instructor.

System Administrator Training –
The Clients staff member(s) designated as the system administrator receive full training on all aspects of the database system, including security, special utilities.

Appendix A:

Appendix B:

Appendix B: Customization

Procedures for Request for customization Change Order (CO)) to HazCentre™ Environmental & Health and Safety Enterprise Information Management System

In a typical project we have the following major phases:

- Discovery or Functional Analysis (Functionality Specification)
- Technical Design
- Development
- Implementation
- Testing
- Delivery

The next step, if there is agreement to move forward, a more complete functional specification will be requested from the client. TelStar reserves the right to assist at this stage in the development of the enhanced functionality request and bill for this assistance. A CO with customer will be opened. Upon receipt TelStar will review this functional specification document of proposed additions and or modifications to the existing HazCentre application and TelStar will provide written approval with or without comment. In addition, preliminary cost for the development of a functionality specification document and development will be presented to the client for approval. After TelStar's receives an approval from the client for the writing of the functionality specification and the development, work will begin and a time line will be put in place for delivery.

User Acceptance Testing
Test procedures lead to formal acceptance of new or changed systems. User Acceptance Testing is a critical phase of any systems project and requires significant participation by the end users. To be of real use, an acceptance Test Plan need to be developed in order to plan precisely, and in detail, the means by which acceptance will be achieved. The final part of the Test Plan can also include a parallel run to prove the system against the current system. The Test Plan will vary from system to system but, in general, the testing should be planned in order to provide a realistic and adequate exposure of the system to all reasonably expected events. The testing can be based upon the User Requirements Specification to which the system should conform. As in any system though, problems will arise and it is important to have determined what will be the expected and required responses from the various parties concerned; including Users; Project Team; Vendors and possibly consultants/contractors. In order to agree what such responses should be, the end users and the project team need to develop and agree a range of severity levels. These levels will range from 1 to 6 and will represent the relative severity, in terms of business/commercial impact, of a problem with the system, found during testing. Below is TelStar's Severity Level Model, used successfully in past implementations. Level 1 is the most severe with Level 6 having the least impact.

Show Stopper = Level 1: It is impossible to continue with the testing because of the severity of this error / bug

Critical Problem = Level 2: Testing can continue but we cannot go into production (live) with this problem
Major Problem = Level 3: Testing can continue but this feature will cause severe disruption to business processes in live operation
Medium Problem = Level 4: Testing can continue and the system is likely to go live with only minimal departure from agreed business processes
Minor Problem = Level 5: Both testing and live operations may progress. This problem should be corrected, but little or no changes to business processes are envisaged

Cosmetic Problem = Level 6: This may include but is not limited to such problems as colors; fonts; pitch size; however, if such features are key to the business requirements they will warrant a higher severity level.

Finally, it is crucial to agree the criteria for acceptance. Because no system is entirely fault free, it must be agreed between End User and vendor, the maximum number of acceptable 'outstanding' in any particular category. Again, prior consideration of this is advisable. In some cases, users may agree to accept (sign off) the system subject to a range of conditions. These conditions need to be analyzed as they may, perhaps unintentionally, seek additional functionality, which could be classified as scope creep. In any event, any and all fixes from the software developers, must be subjected to rigorous System Testing and, where appropriate Regression Testing.