4.1.2 Technical Objectives

RFP reference: 6.1.2 Functional Objectives, Page 37

The FACTS II solution will meet the following functional objectives:

- To create a flexible, easily maintained n-tiered, web-browser based system using current technology that is broadly supported;
- To follow a structured life cycle approach and best-practice development models and methods;
- To use, where possible and practical, Commercial-Off-The-Shelf (COTS) components that are fully integrated into a proven best-of-breed solution pursuant to 45 CFR 95.617;
- To use an Integrated Applications Development Environment based upon the programming languages approved by the State of Delaware (see appendices);
- To accurately convert DSCYF's existing data from FACTS and mission-critical stand alone systems; and
- To integrate a reporting database/data warehouse within the system.

Deloitte's proposed .NET based FACTS II solution complies with Delaware IT standards. Our technical solution is Web-based, integrates best-of-breed COTS products using an integrated applications development environment. It enables smooth data conversion and leverages your requirements of data warehouse structure. Deloitte delivers to DSCYF a robust technical solution for now and the future.

The Delaware FACTS II RFP provided excellent insight into the technologies, standards, and desired direction for the implementation of the FACTS II system. Deloitte has reviewed your technology objectives, requirements and standards and selected DC FACES.NET as our proposed transfer solution.

Our proposed application architecture employs a production-deployed, n-tier application infrastructure that has been tested and proven in the District of Columbia where 1,500 plus caseworkers, supervisors, administrators and service providers use it every day to track case status, guide service delivery, and manage children services programs.

DC FACES.NET is not merely production proven – it is transfer proven. Deloitte has successfully transferred DC FACES.NET into the state of Alabama and Allegheny County, Pennsylvania.

- Successfully transferred and in production in three jurisdictions
- Nominated twice for Computer World awards
- Accessible to more than 1,500 staff persons and external users in the District of Columbia
- Production proven, n-tiered architecture providing scalability, extensibility, easy maintainability and reliability

In reviewing your RFP, we incorporated the technical objectives you have for the FACTS II system and believe that DC FACES.NET fully addresses each of those objectives. The following table explains our confidence in greater detail.

DE FACTS II Technical Objective	Features of DC FACES.NET Solution
To create a flexible, easily maintained n-tiered, web-browser based system using current technology that is broadly supported;	• Based on .NET framework version 4.0 and Oracle 11g. • N-tiered, browser based • Flexible and easily maintained via user configurable components.
To follow a structured life cycle approach and best-practice development models and methods;	• Utilizes Deloitte's standard CMMI based System Development Life Cycle approach - Deloitte Playbook. • Playbook has been used for the delivery of all DC FACES.NET based SACWIS systems, plus the Tennessee SACWIS.
To use, where possible and practical, Commercial-Off-The-Shelf (COTS) components that are fully integrated into a proven best-of-breed solution pursuant to 45 CFR 95.617;	• Uses an SOA based approach to integration of best of breed COTS components including: – Search engine – Intelligent Search – GIS – Google Maps – Imaging – Atalasoft DotImage – Spell check – Keyoti Rapid Spell
To use an Integrated Applications Development Environment based upon the programming languages approved by the State of Delaware (see appendices);	• DC FACES.NET is built using ASP.NET C# and Oracle PL/SQL
To accurately convert DSCYF's existing data from FACTS and mission-critical stand alone systems; and	• The Deloitte team brings in depth knowledge of the existing FACTS database • Our conversion approach for transferring data into FACES.NET has been proven in three jurisdictions.
To integrate a reporting database/data warehouse within the system.	• The DC FACES.NET solution integrates with Business Objects Enterprise using its Info View and Web Intelligence toolsets to provide reporting and data warehousing functionality

Table 4.1.2-1. Features and Benefits of DC FACES.NET solution that align with DE FACTS II technical objectives.

Meeting Your Technical Objectives

Web-based, n-Tiered Architecture

Deloitte recognizes that integrated children's services are best delivered away from the office and closer to the community. It is this recognition that provided motivation to our District of Columbia client, Children and Family Services Agency (CFSA), to move away from their legacy system and appoint Deloitte to develop a state-of-the-art Web-based application.

DC FACES.NET is a Web-based, thin-client application that eliminates the need to run locally distributed software. It is accessible over intranet and Internet connection.

DC FACES.NET is built on the Microsoft.NET Framework version 4.0 — ASP.NET and C# — which offers an n-tiered, scalable, high-availability, enterprise platform for object-oriented, component-based application development and deployment. The underlying framework consists of several distinct yet highly interdependent components: hardware, software, database, network and functional architectures.

The .NET framework implements the Model-View-Controller (MVC) design pattern, which is an industry standard design pattern used to construct n-tiered applications with a graphical user interface. This architecture consists of multiple layers, described in detail in *Section 4.3, Technical Requirements*, but with clear distinction between Presentation, Business/Logic and Data layers.

Deloitte has deployed the proposed web based, n-tier architecture in:

- District of Columbia, supporting 1,500 users
- Allegheny County, Pennsylvania, supporting 2,200 users
- State of Alabama, supporting 2,300 users

The application tiers are deployed on multiple load balanced servers to support your proposed user community in a highly available and scalable manner.

This architecture is illustrated in the figure below.

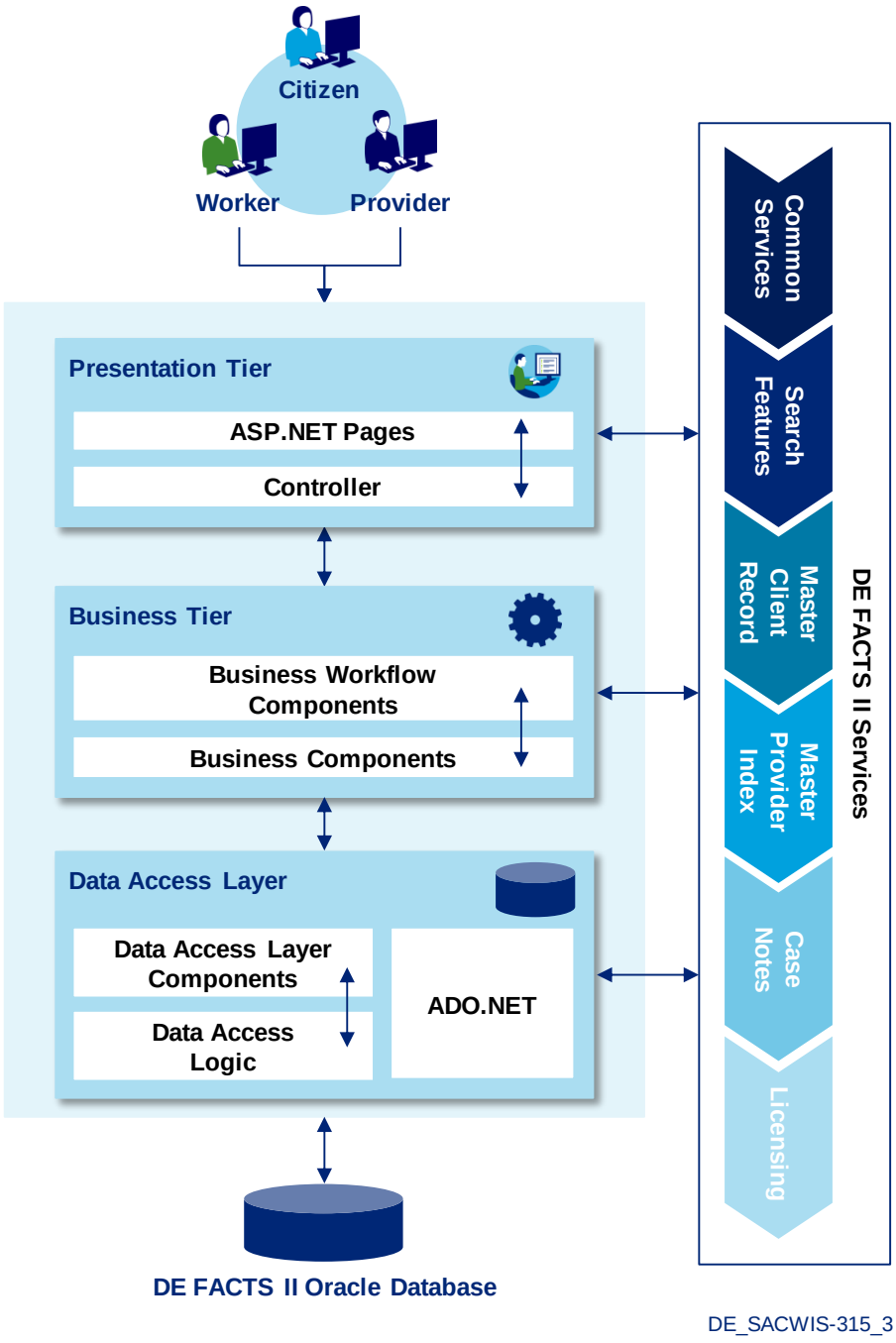

Figure 4.1.2-1. Delaware FACTS II N-Tier Application Architecture
A Web-based application that is accessible remotely and has distinct Presentation, Business/Logic and Data Access Layers.

The three primary layers of the application can be described as follows:

- **Presentation Tier.** Presentation is composed of the Model-View-Controller (MVC) pattern. The view is implemented using ASPX files that are rendered as HTML within the user's browser. The model is implemented using ASP.NET and the controller is implemented using C# objects. The presentation tier runs on the Internet Information

Services application server and is highly de-coupled from the business tier. In addition to ASPX files the Presentation tier also consists of following components:

- **JavaScript.** These are files that provide client side scripting to enable light weight logic without the need for server interaction.
- **Style Sheets.** These are files that provide a consistent look and feel to the entire application by using cascading style sheets.
- **Images**: These are files that provide graphical look and feel such as banners, icons etc.

- **Business Tier.** The Business Tier consists of compiled code written in object oriented C#. These files contain business workflows and application business logic.
- **Data Layer.** The Data Layer consists of pre-compiled database objects such as PL/SQL stored procedures to perform defined database operations.

DC FACES.NET is developed to run on a selection of current hardware and operating systems. Given this high degree of cross-platform compatibility, the solution is able to use a variety of manufacturer platforms, including DELL, HP and IBM. Based on our use of the industry standard TCP/IP Protocol and operating systems that are being used by the State of Delaware to run other mission critical applications, we are confident that DC FACES.NET is compatible with the your existing network and other technology assets. Section 4.3, Technical Requirements provides a detailed description of our proposed n-tiered architecture - its scalability, manageability, accessibility and reliability for DE FACTS II.

Structured Life Cycle Approach and Best-Practice Development Models and Methods

DC FACES.NET was constructed using the Deloitte Playbook systems development methodology. It is based on the processes and guidelines that have been defined by the Software Engineering Institute's Capability Maturity Model® Integration **(CMMI)** and provides a structured approach for the key systems development life cycle phases of requirements definition, design, development, testing, and deployment (implementation).

The figure below illustrates how we will use this Playbook methodology, combined with our SACWIS specific methodology assets, to offer you an approach that is not merely proven for system development, but proven for system development of SACWIS systems.

Deloitte has already implemented the CMMI based Playbook methodology in over 100 Health and Human Services implementations including the State of Delaware

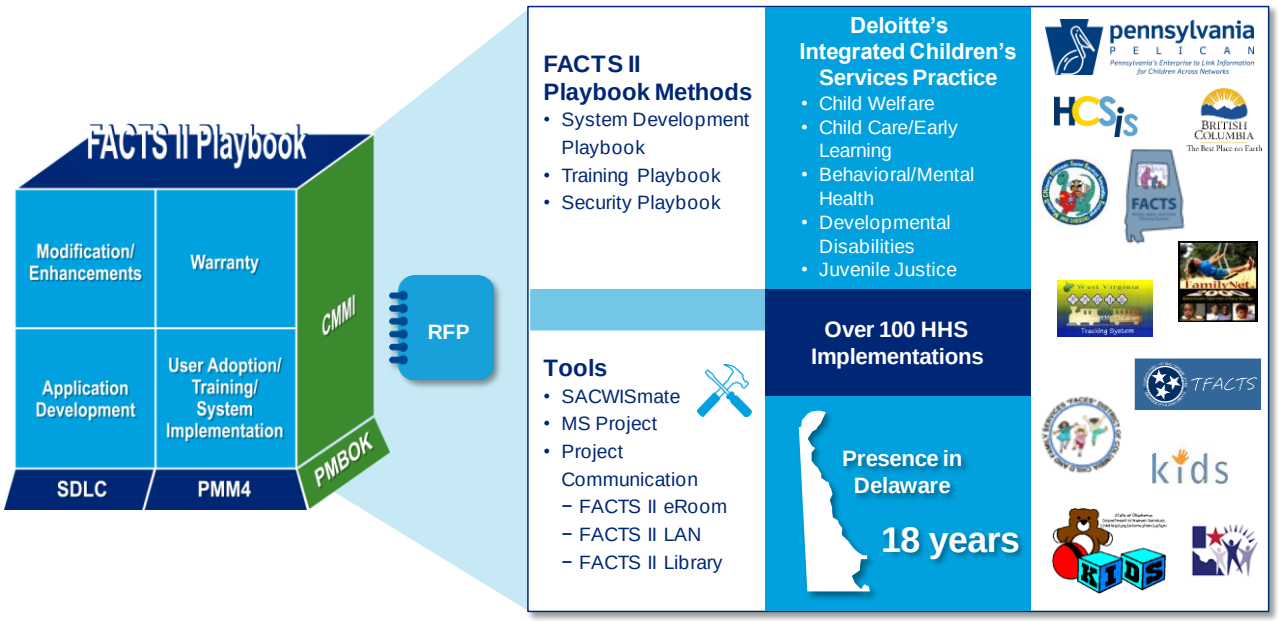

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Figure 4.1.2-2.The DE FACTS II Playbook Method.
Playbook helps accelerate the design and reduce the time for delivery. Using the Waterfall model and best practices from our approach helps produce high quality results.

The primary goal of the FACTS II Playbook is to equip each of our team (and your team) with the tools necessary to most effectively develop and deliver a quality software that solves a client's business problem(s) or need(s). This goal is achieved through the three key aspects – Defined, Documented and Repeatable.

FACTS II Playbook is Defined, Documented, and Repeatable	
Defined	Deloitte's FACTSII Playbook has evolved over multiple years of collective experience on systems development projects, and continues to adapt to incorporate effective practices and lessons learned from industry leading projects across the country. Defining these best practices and methodologies takes the guess work out of key project tasks.
Documented	FACTS II Playbook is well documented and distributed to each of our consultants whenever a new version is created. The contents of each version are also thoroughly explained through various training methods. This allows the project team to have access to the latest and updated tools and methodologies available at all times.
Repeatable	The tools and methodologies in the FACTS II Playbook comply with repeatable CMMI standards . The proposed project have each used the Playbook on prior SACWIS engagements.

Table 4.1.2-2. Deloitte's Playbook is defined, documented, and repeatable.

In Section 4, Bidder's Products, Methodology, and Approach to the Project, we describe our Playbook methodology in greater detail.

Appropriate COTS Integration

With the advent of open-architectures, applications are able to leverage technology components produced by third parties and integrate them into the overall system. During development of DC FACES.NET we took just this approach – integrating key third party products rather than custom developing that functionality in-house.

It is important to note that, some of these components provide functionalities that would be difficult to build grounds up – taking too much of resources to build and maintain. Other components simply provide best in class specialized functionalities. The following are examples of where these COTS products have been used:

Search. Intelligent Search Technology's, NameSearch is a specialized tool that uses fine tuned data matching algorithms to provide searching capabilities that greatly exceed anything that could be constructed by a general systems integrator. The use of this third-party component brings the power of patented data search algorithms to achieve the most optimized search results possible, in a highly flexible manner. The practical benefit of a highly specialized COTS search engine is the reduction of duplicate records within the SACWIS database. The seamless integration of the Intelligent Search into DC FACES.NET is shown in the figure below.

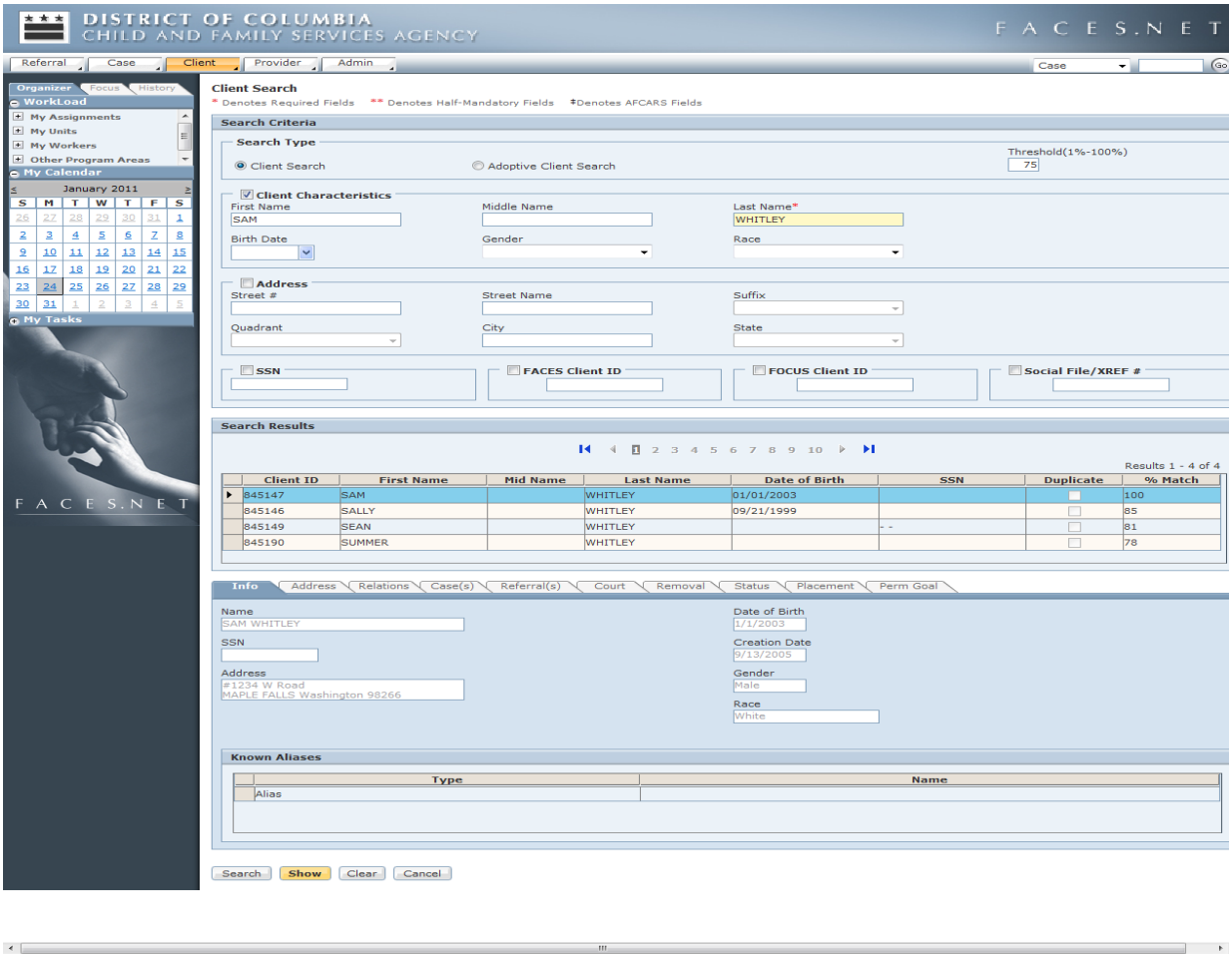

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Figure 4.1.2-3. Client Search Screen.
Intelligent Search Technology's, NameSearch tool is used to search and report a potential list of duplicate values. Users specify a threshold limit and the results indicate the percentage (%) by which the retrieved records match the search criteria.

- **GIS.** For address validation and GIS, DC FACES.NET utilizes Citizen Atlas web service. For DE FACTS II, Deloitte proposes to use Google Maps so as to align with State's existing Standards and Policies. The ease of switching from Citizen Atlas to Google Maps is a mark of our SOA, loosely coupled approach. This is shown in the figure below.

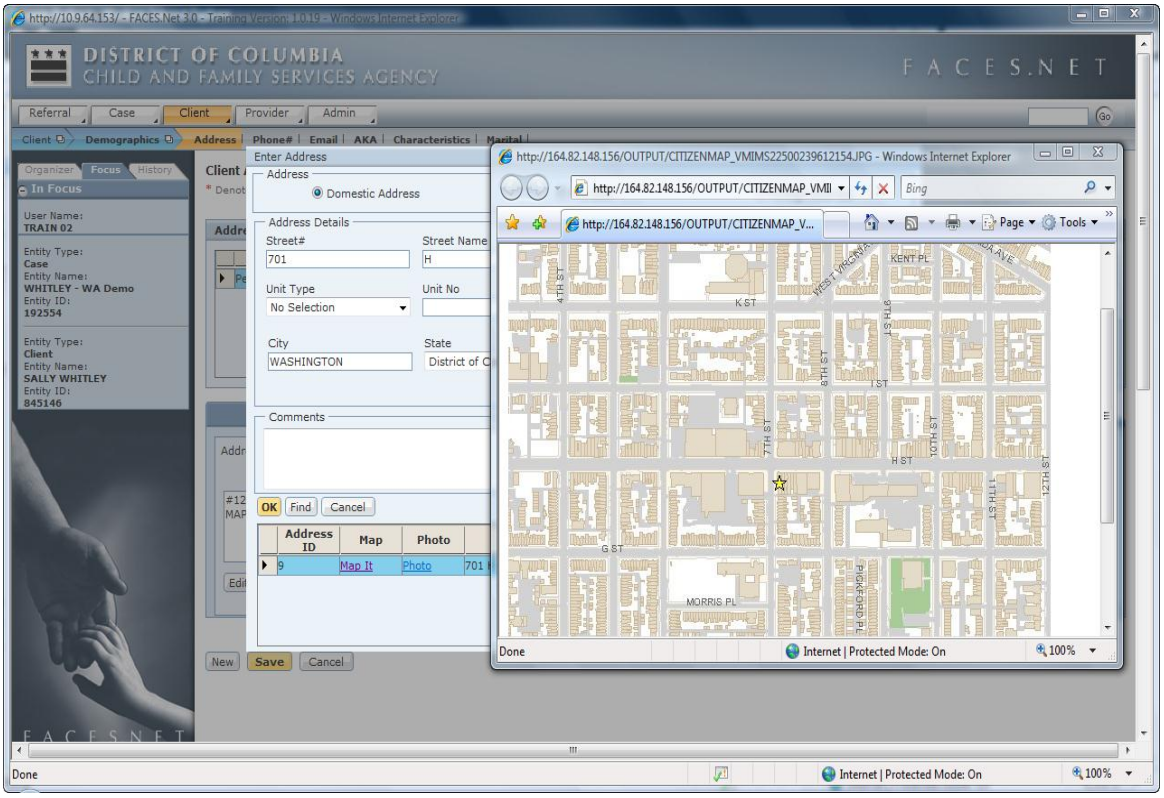

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Figure 4.1.2-4. GIS and Address Validation.
Google MAPS API to enable searching for an address and show it on map.

- **Imaging.** To capture case work documents for attachment to a case, client or provider DC FACES.NET integrates the AtalaSoft Document Imaging product. This enables the user to upload scanned paper forms and documents directly into the SACWIS database. This feature allows the complete record to exist in one place and reduces the need for paper case files.

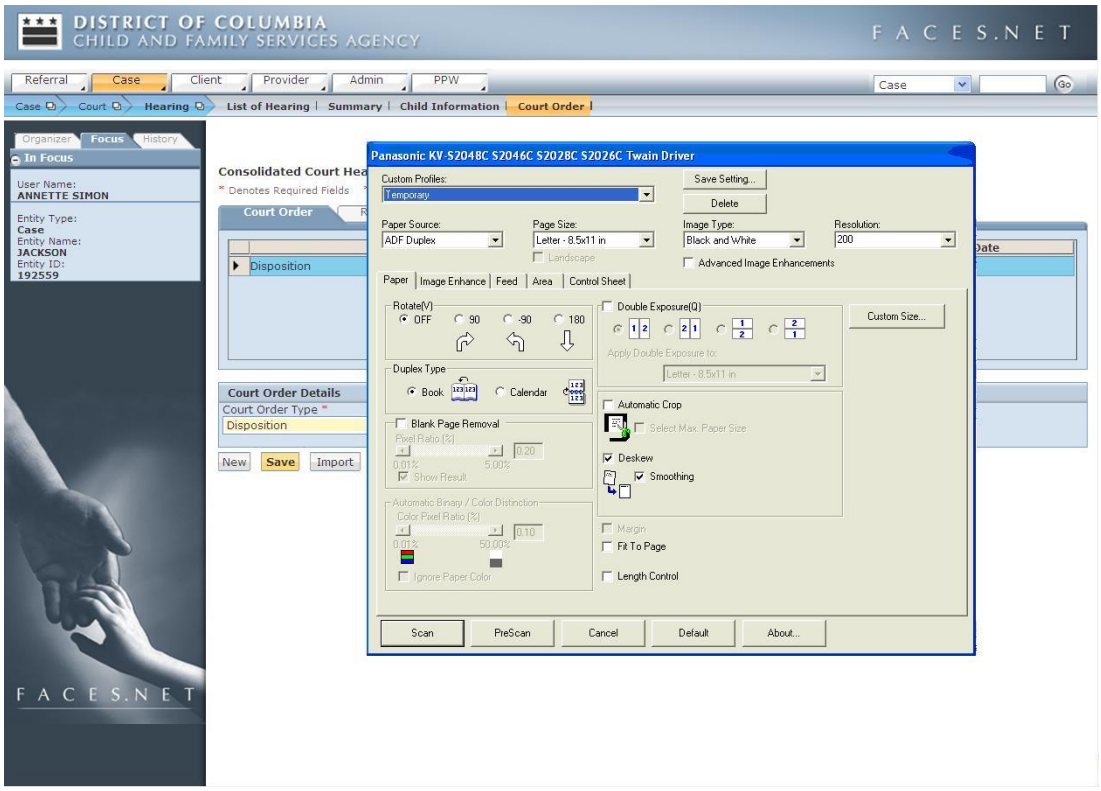

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Figure 4.1.2-5. Scanning Court Orders.
AtalaSoft Document Imaging SDK for scanning and related document management functionality.

The selection of these third-party components illustrates how DC FACES.NET supports an open and extensible architecture in which individual COTS components, from multiple vendors, can be slotted in and out to provide a 'best of breed' solution.

The following table illustrates all of the COTS components currently utilized by DC FACES.NET and any additional or alternative components proposed for DE FACTS II.

Function	Description	Tool	COTS Benefits DE FACTS II
Spell Checking	Provides spell checking in case notes, narratives and other long text fields	Keyoti Rapid Spell	Improves the quality of documentation by providing quick editing features especially when documenting lengthy text notes and narratives.
Document Scanning and Imaging	Captures documents for attachment to a case, client or provider	Atalasoft DotImage Document Imaging	Imports paper forms and documents allowing the complete case record to exist in one place – the SACWIS.

Function	Description	Tool	COTS Benefits DE FACTS II
GIS – Address Validation and Mapping	Validates addresses and support the mapping of address locations	Google Maps	Helps improve the validity of addresses and provides users with the exact location for investigations or inspections.
Intelligent Search	Support the real-time searching for clients using demographic data	NameSearch	. This tool uses advanced algorithms to narrow down potential matches using a variety of searching parameters.
Information Delivery	Provides the method for static and ad hoc reporting	BusinessObjects	Supports robust static and ad hoc reporting through a web-browser.
Online, Context Sensitive Help	Provide tool to document and use online help content	RoboHelp	Supports creation of help files that could be integrated with online web pages.
Content Security	Provides ability to secure content	iText	Confirms that the received and sent communication is secured and originates from a valid source
Scheduler	Provides ability to schedule and execute batch jobs	Dollar Universe	Supports planning, automated execution and status reporting for scheduled batch jobs.

Table 4.1.2-3. DE FACTS II Technology Enablers – COTS.

Section 4.3, Technical Requirements provides further details on COTS components including the methodology used to integrate them with DE FACTS II.

Integrated Applications Development Environment Based Upon the Programming Languages Approved by the State of Delaware

DC FACES.NET is a Web-based application built using Microsoft Visual Studio .NET and the object-oriented programming language C#. Oracle 11g serves as the underlying database. Both of these product sets are contained on the state standard list.

We have used this combination of development tools for numerous development projects (including for SACWIS). Our experience suggests that the use of .NET enables a productivity gain during development over the use of

did you KNOW?

Deloitte was engaged by Delaware Department of Health and Social Services (DHSS) to transfer and modify a self service Web-based application from Pennsylvania allowing Delaware citizens to screen and apply for Medicaid, TANF, General Assistance, and Food Stamps.

Java based technologies.

The following figure illustrates some of the features of the .NET development environment that we have found important during prior SACWIS engagements.

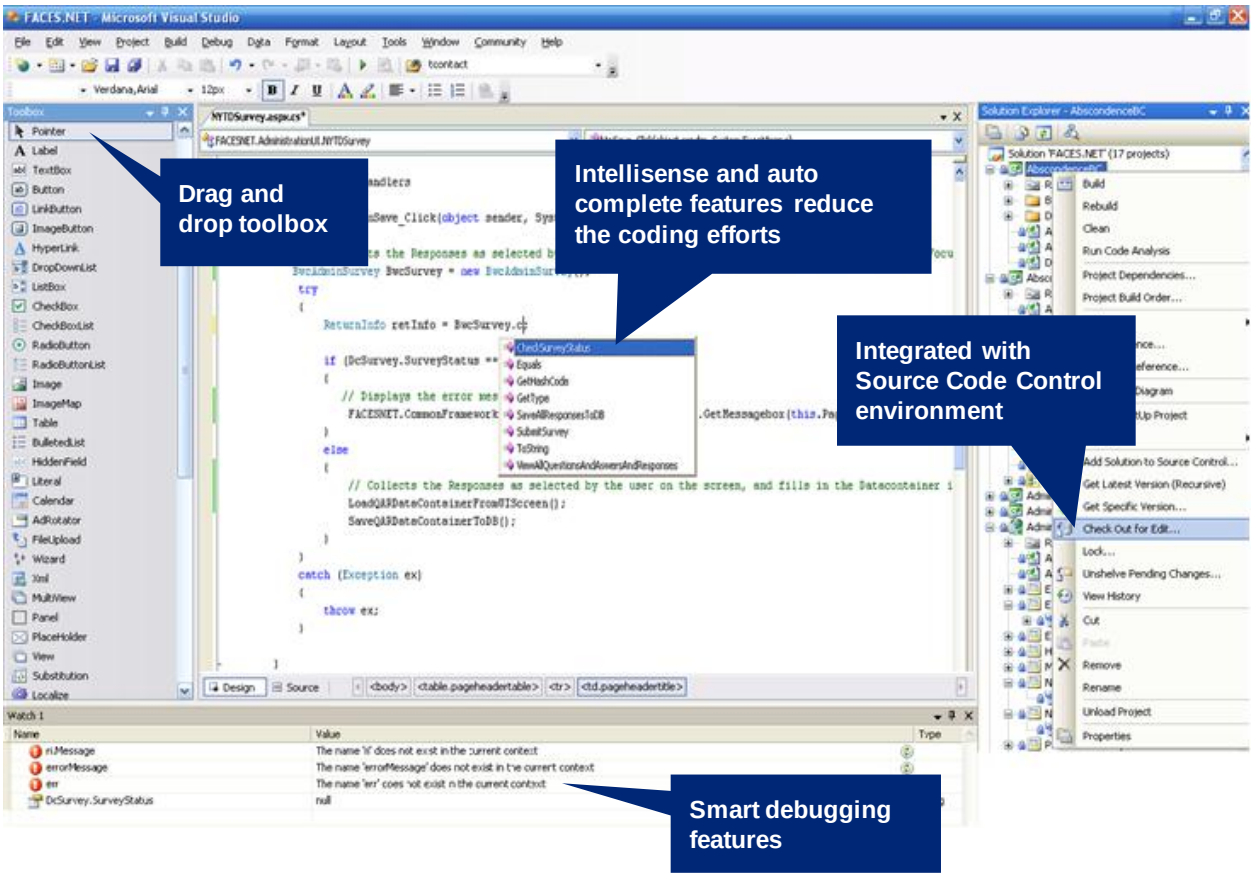

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Figure 4.1.2-6. Microsoft Visual Studio provides a powerful integrated development environment. Microsoft .Net framework with C# language provides a solid IADE that confirms with the State Standards and Policies. It provides a single environment to design, code, debug, source code control, build and deploy DE FACTS II solution.

Section 4.3, Technical Requirements provides a detailed description of our proposed n-tiered architecture and tools. Section 4.6, System Hardware describes our development environment along with specific hardware and software required to develop the DE FACTS II system.

Convert DSCYF's Existing Data from FACTS and Mission-Critical Stand Alone Systems

Successful and accurate conversion of legacy data into the new DE FACTS II is a critical undertaking, essential to the operational success of the production environment. The ability for DE FACTS II to effectively collect, maintain, retrieve, and distribute accurate information, is extremely dependent on the conversion of existing legacy system data available from multiple sources including the existing FACTS system.

Legacy data conversion is also important to support the ongoing business operations and reporting such as NCANDS and AFCARS which require a historical view of data.

The Deloitte Team is familiar with your existing FACTS system. Our teaming partner has been managing its maintenance and enhancement since implementation.

We have completed similar SACWIS conversions for the states of Oklahoma, West Virginia, District of Columbia, Commonwealth of Massachusetts and Alabama. Our prior experience provides us insight into the unique aspects of conversion for SACWIS. Specifically:

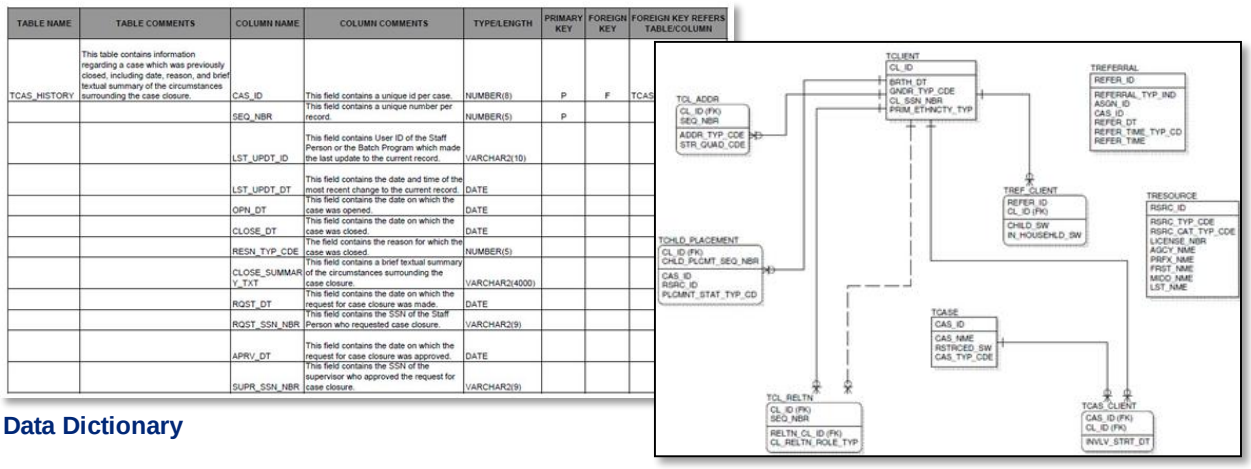
- Disparate data sources and applications which may require the establishment of a cross-reference process to link corresponding data for a single case
- Large amounts of vital case data in electronic and non-electronic formats including paper case records and electronic forms across multiple State agencies
- Data mapping complexities given the number of direct systems associated with integrated children services data
- Extremely long running cases in which large amounts of case data has been accumulated
- Potentially high incidences of duplicate persons within the legacy database

Deloitte has successfully converted data from multiple legacy systems to integrated children services systems similar to DE FACTS II in:

- State of Oklahoma
- West Virginia
- District of Columbia
- Commonwealth of Massachusetts
- State of Maryland
- State of Alabama

Deloitte also understands that extracting data and storing it in a single consolidated DE FACTS II database requires that the new database has a structure and model that supports logical organization of data. The conversion team must be able to map source data to target data model. The Deloitte Team already knows the source database – FACTS – since they are currently managing this legacy system. We already know the fundamentals of the target database, since it will be based upon DC FACES.NET. We are therefore optimally placed to perform that mapping.

The figure below illustrates how we used our existing data model to begin that mapping process.



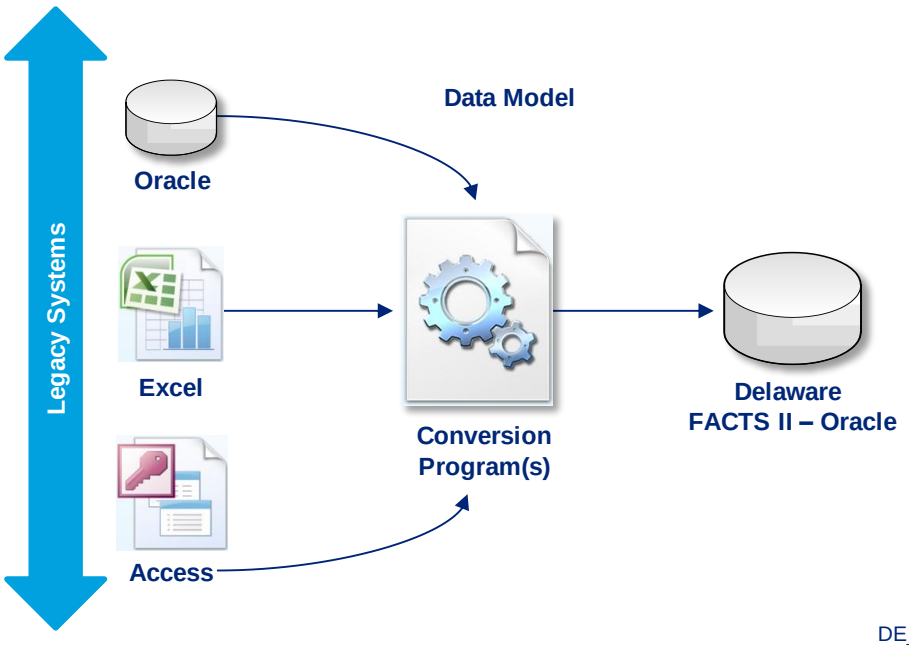


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Figure 4.1.2-7. Data Model and Data Dictionary complement our Conversion Approach
Deloitte's knowledge of existing legacy FACTS system, its past experience converting data from a variety of data sources combined with a consolidated data model and data dictionary for the proposed DE FACTS II confirms accuracy and reliability during conversion process.

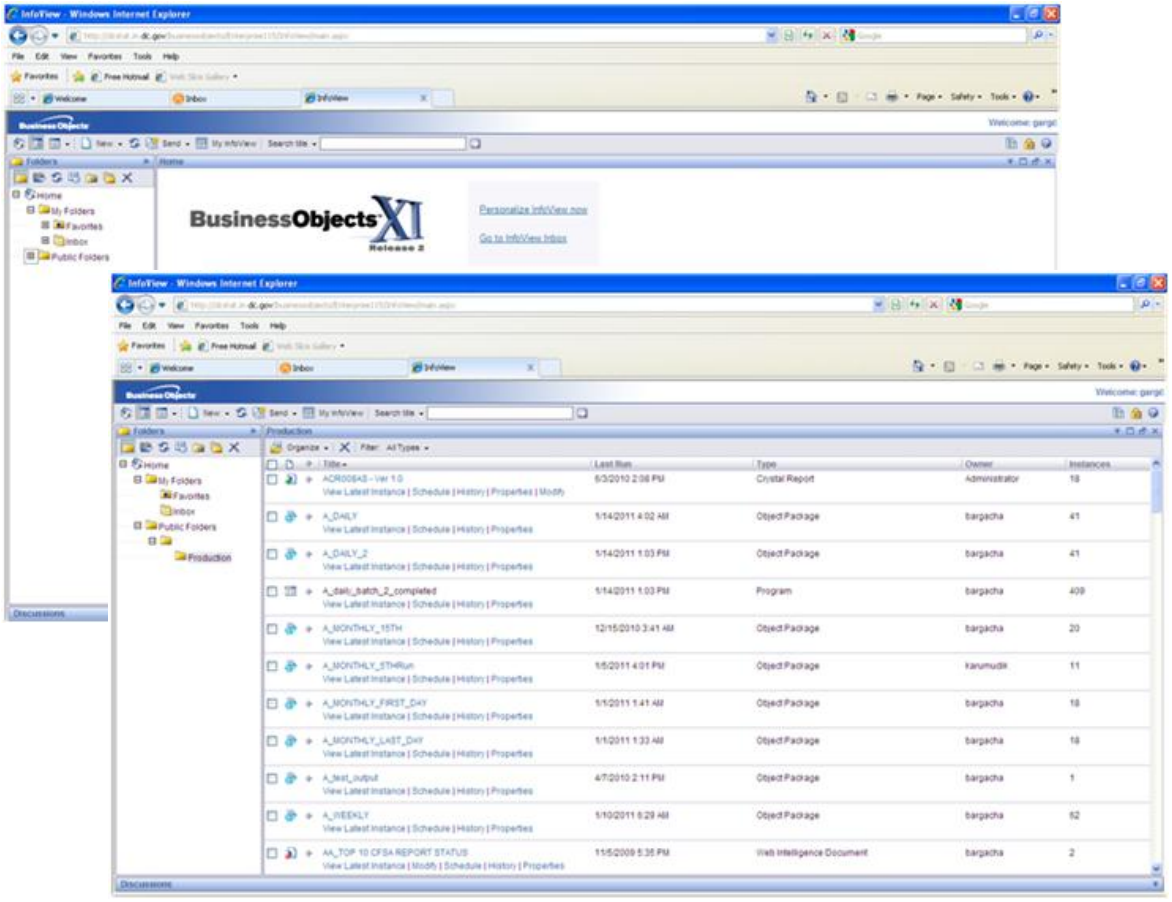
Section 4.15, Conversion provides details of our approach to conversion.

Integrate a Reporting Database/Data Warehouse

With more than 900 physical tables in the database, DC FACES.NET already supports all Federal SACWIS data collection and reporting requirements. Our reporting solution provides Management Statistical Reports to a combined user base of more than 1,600 users through the use of Business Objects Enterprise Suite. In-built support for business intelligence tools to support decision making efforts helps agencies such as DSCYF focus on analyzing past performance, predicting future trends and formulating policies that enable outcome based case management.

Our reporting solution provides two types of analytical, process based reporting tools which are separate from the other mission critical business processing. These are user specified static and ad hoc reports.

- The static reports are production scheduled and generated based upon standard, structured PL/SQL using BusinessObjects Enterprise Server.
- The ad hoc reports use BusinessObjects Web Intelligence platform. When requested, BusinessObjects allows a user to filter the data to be included on the report, allowing the report to be tailored to their individual needs. The filtering process is tied to the application security such that a user must be granted specific access to the report, as part of their user group and security profile.



DE_SACWIS-196

Figure 4.1.2-8. Business Intelligence using SAP BusinessObjects.
BusinessObjects Enterprise enables users to view reports through a Web-based interface.

Deloitte is already using Business Objects as an Information Management solution for integrated children services systems in:

- District of Columbia
- State of Alabama

Section 4.10, Reports describes our approach to DE FACTS II reporting requirements.

In addition to the Technical Objectives, Deloitte also recognizes that the DSCYF vision of DE FACTS II Technical Architecture encompasses several over-arching themes. Our architecture is aligned with DSCYF's vision to meet the business needs in the form of a fully integrated, statewide Web-based FACTS II solution. As the following table demonstrates, we believe that our solution's architecture aligns with the Department's vision as outlined in Technical Architecture Concepts:

Delaware FACTS II Technical Architecture Theme	Does DC FACES.NET meet this theme?	Example of how this theme is met by DC FACES.NET
Web-browser based	Yes	DC FACES.NET users use industry standard web browser - Internet Explorer v6, v7 and v8.
N-Tiered	Yes	DC FACES.NET architecture is n-tiered and utilizes distinct Presentation, Business and Data layers.
Extensible	Yes	DC FACES.NET is extensible – on top of the core child welfare functionalities – upon its transfer to different jurisdictions, Deloitte has extended the solution to support Youth Rehabilitative Services and Adult Protective Services to support state specific requirements. Within Child Welfare, with the evolution of new programs and policies, the solution has been extended to include several new functionalities such as Structured Decision Making Assessments, Guardianship Assistance Payments, NYTD, etc.
Configurable	Yes	DC FACES.NET allows configuring key rules and reference table values through easy to use screens, for example: • Values for dropdown boxes such as Gender, Race, Languages, Types of Permanency Goals, etc. • Error Messages • Organization Structure • Workflow
Modular	Yes	DC FACES.NET allows for code reuse and upgrade without significant changes to the core architecture. It also utilizes best of breed COTS in a loosely couple manner, for example: • To support state specific requirements, different web services are used for GIS and Address validation in DC and Alabama – both services work seamlessly with the application • To support state specific requirements, different search engines are used for data matching in DC and AL - both data matching platforms work seamlessly with the application • To support state specific requirements, different Relational Database Management Systems are used – Oracle10g in DC and Allegheny County, PA and IBM DB2 in Alabama - without significant changes to presentation and business tiers. The changes were isolated to the data tier.
Business-rules	Yes	DC FACES.NET provides configurable rules to guide users through

Delaware FACTS II Technical Architecture Theme	Does DC FACES.NET meet this theme?	Example of how this theme is met by DC FACES.NET
driven		the completion of child welfare tasks. Different functional modules share common business processes while maintaining their unique criteria, for example: • When completing an intake, the application does not allow users to navigate to various screens unless the required information is captured on the Hotline Report • When entering a new client within the system, either during intake or during case management, the business rules engine automatically triggers a system wide search process among all existing clients to help identify if the new client is already part of the system • Based on the way a particular workflow rule is configured, the application automatically routes requests for approvals from workers to supervisors and if necessary, to the next tier within the organization hierarchy
Enterprise-wide architecture	Yes	DC FACES.NET architecture is designed to meet "technical" objectives and is "business functionality" agnostic - meaning it does not matter if the screen or any other system component is designed to capture Child Welfare related data or Youth Rehabilitative Services related data. As long as the developer follows the development standards, the component could be designed to meet any business purpose. This flexibility underlines how DC FACES.NET has been extended in various jurisdictions to include Youth Rehabilitative Services and Adult Protective Services on top of the core Child Welfare functionalities. The architecture can be extended enterprise wide rather than being isolated for a specific program. Other examples of how DC FACES.NET could be reused are as follows: • **Service Reuse.** DC FACES.NET GIS service that currently enables finding and mapping of addresses only for the clients can be reused for any other entity such as for finding and mapping Provider locations. • **Code Reuse.** DC FACES.NET data access tier which exposes a common functionality to perform routine create, read, update and delete (CRUD) database operations is reused by the developers through invocation of the exposed methods from their respective business components. They do not write code to perform these operations. Since the data access tier is separated from other layers, applications could also reuse this tier by referencing the solution's data access library. • **Data Reuse/Carry Forward.** A normalized data model avoids redundancy and improves data reuse through carry-forward functionality for instance, key client data is stored in a single table and hence data collected during Intake is automatically carried forward and made available to during case management.

Delaware FACTS II Technical Architecture Theme	Does DC FACES.NET meet this theme?	Example of how this theme is met by DC FACES.NET
Application Matrix Security	Yes	DC FACES.NET uses role based security model which is complemented by easy to use screens that enable administrators to manage organization structure, grant and deny various levels of authority to a staff person or external users such as providers. Pre defined roles enable administrators to control user access to different screens, screen elements, reports, etc based on the entity selected by the user. For instance, users can be denied access to a case if they are not assigned to it. Security can also be set at program level for example; a worker involved in child welfare could be denied access to data elements that are meant for Youth Rehabilitative Services workers.
Normalized, Relational Data	Yes	DC FACES.NET uses the Oracle relational database management system for storing data. The database is highly structured and normalized.
Controllable Auditable Data	Yes	DC FACES.NET has an in-built audit trail functionality that not only captures who created and updated the data at what date and time but also captures which user was viewing the data through which screen. In addition, it is possible to capture snapshots of data prior to each change. This audit trail functionality works for batch initiated changes as well as screen based changes.
De-Normalized, Warehousing Database	Yes	DC FACES.NET supports the requirement to have a database that meets DSCYF reporting needs. The extent of de-normalization that is required within the warehouse environment will be determined as part of the project life cycle once the reporting needs become clarified. For DC FACES.NET, we have a separate reporting database that is refreshed daily with the production data to ensure that the operational database is segregated from the reporting/data warehousing operations. We propose to have the same approach for DE FACTS II.
Scalable	Yes	DC FACES.NET supports both horizontal and vertical scalability. By using clustered and load balanced database and application servers, additional memory and hardware can be added easily without the need to change the solution architecture. Deloitte has already accomplished within the District of Columbia as part of a server upgrade project. Using this flexibility, the DC FACES.NET solution is highly scalable. In fact, we have stress tested the application to over 5,000 users employing the District of Columbia hardware configuration.

Delaware FACTS II Technical Architecture Theme	Does DC FACES.NET meet this theme?	Example of how this theme is met by DC FACES.NET
Reliable	Yes	DC FACES.NET architecture has reliability built into it. The solution uses redundancy architecture applied to server, storage, and network infrastructure. For example: • Servers are load balanced and clustered to confirm that there is no single point of failure. • The database is configured to synchronize transactional data with a standby database. In the event of a failure, the standby database takes over the responsibility of the primary database server thus ensuring business continuity. • The architecture supports backup and recovery operations. Frequency of backups and archiving is generally defined after working with our clients.
Secured	Yes	DC FACES.NET uses robust security model to confirm that data is accessed only by authenticated and authorized users. For example: • N-tier architecture confirms that the data tier cannot be accessed directly by the users or through Presentation tier - all online users are authenticated through LDAP login and even when authenticated the solution utilizes role based security model to grant or deny access to users to specific data elements • A comprehensive audit trail functionality confirms that the user activity such as - when was the data last viewed, through which screen was it viewed, who viewed the screen, who created or updated a record and at what date and time is captured • As a means to protecting the data contained within the application, DC FACES.NET also provides security via Secure Sockets Layer (“SSL”) protocol to retain the integrity of all information.
Intuitive	Yes	DC FACES.NET user interface is designed to provide intuitive navigation and usability. Deloitte engaged with an external software ergonomics firm to design the user experience. At the initial roll out of DC FACES.NET, over 70% of social workers thought that their productivity would improve as a result of the new user interface.
Maintainable	Yes	DC FACES.NET architecture is based upon industry standard technology platforms including Microsoft .NET and Oracle. The proposed technology toolset as described in sections below aligns with State of Delaware IT Standards. Through our work with the District of Columbia and Alabama, we have demonstrated that the system is eminently flexible and maintainable.

Delaware FACTS II Technical Architecture Theme	Does DC FACES.NET meet this theme?	Example of how this theme is met by DC FACES.NET
Cost-effective	Yes	Deloitte's proposed transfer for DC FACES.NET as Delaware FACTS II confirms immediate cost-effectiveness for DSCYF in following ways: • The biggest benefit is that there are no licensing costs for the application itself. You own it and can modify it in the future. • DC FACES.NET is already operational in three jurisdictions; proving that its architecture is already refined to support the day to day business needs of DSCYF. It does not need any further investments related to architecture modeling/re-modeling. • DC FACES.NET does not require a grounds-up design and development effort. This in itself is a major cost saver. All of the core pieces of a solution – navigation, user interface aesthetics, security model, data access tier, integration with key COTS components are already in place. • It uses industry standard technology such as .NET which confirms easy availability of staff to maintain it in the long run. Proprietary or unproven technology could have severe long term impact on cost-effectiveness. Additionally, we have found that .NET developers can achieve a measurable increase in productivity when compared to J2EE developers. • It is backed by a standard development methodology that already incorporates lessons learned from more than 16 successful integrated children services implementations. This enables developers to focus on incorporating DE specific features into the solution and not invest time and effort in understanding new or experimental processes thus saving costs in terms of speedier development.
Accessible	Yes	• Ever since February 2006 the system has been accessible to all authorized user 24/7/365 except for pre sanctioned scheduled maintenance tasks. • It is accessible over the state intranet as well as remotely - it is currently used not only by the District staff personnel but also by external Service Providers and exposes key functionalities to other District agencies such as the Metropolitan Police Department • It is a federally assessed system and meets all the necessary accessibility requirements
Manageable	Yes	• DC FACES.NET utilizes standard configuration management tools such as Team Foundation Server to manage software configuration activities such as source code control, versioning and automated build and deployment processes.

Table 4.1.2-4. How DC FACES.NET aligns with DSCYF Vision.