



June 14, 2023

Mr. Robert Ewbank
Department of Information Technology
County of Hawai'i
25 Aupuni Street
Hilo, Hawaii 96720
c/o lania.kau@hawaiiicounty.gov

Re: *Notice to Providers of Professional Services for FY2023-2024 dated June 1, 2023*
Category DS.3: Computer Engineering (Computer Sciences – Web Development and Administration)

Thank you for the opportunity to submit our Statement of Qualifications and expression of interest and qualifications for Category DS.3, Web Development and Administration.

Business Solution Technologies (BST) is a Hawai'i-based consulting firm that provides strategic, operational, and technology solutions focused in the areas of Human Resources (HR), Education, Healthcare and Human Services.

During our 27 years in business in Hawai'i, we have been particularly known for our work with large-scale human resources information systems (HRIS), and we have built a team of highly trained and specialized consultants in response to a growing need for Hawai'i-based solutions. We have since expanded our services and technical expertise in specific and emerging Human Resources Information Systems (HRIS) and related technologies in the Education, Healthcare and Human Services sectors.

Recently, we proposed a web and cloud-based solution for the Hawai'i Police Department called the Firearms Application and Registration Management System (FARMS). This system is customizable and parameter-driven to provide flexibility to meet the needs of different organizations. It runs on an Amazon Web Services cloud infrastructure and is easily deployed for end-user access from a web browser on a desktop, laptop, tablet, or smartphone.

Business Solution Technologies, Inc • 1188 Bishop Street, Suite 1801 • Honolulu, HI 96813 • (808) 537-3853 • www.bstusa.com

*Prepared for County of Hawai'i, Department of Information Technology, Fiscal Year 2023-2024
for Category DS.3: Computer Engineering (Computer Sciences – Web Development and Administration)*

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Our work with IT implementations also includes strategy development and implementation, business processes assessment and design, system configuration, development, integration and implementation, project management, change management, analytics, infrastructure, and operations support for some of Hawai'i's largest businesses. We have provided background information on BST and our client projects on the pages that follow.

Please also view our website at www.bsthawaii.com for more information.

We respectfully submit the following in response to Category DS.3, Computer Engineering (Computer Sciences – Web Development and Administration):

- 1) The name of the firm or person, contact information including email address, the principal place of business, and location of all of its offices:

Firm Name: Business Solution Technologies, Inc.

Contact: Kevin Costa, kevin.costa@bstusa.com

Principal Place of Business: 1188 Bishop Street, Suite 1801, Honolulu, Hawai'i 96813

Location of All Offices: 1188 Bishop Street, Suite 1801, Honolulu, Hawai'i 96813; and 650 Iwilei Road, Suite 750, Honolulu, Hawai'i 96817

- 2) The age of the firm and its average number of employees over the past five (5) years:

Age of Firm: 27 Years

Avg. Number of Employees: 12

- 3) The education, training, and qualifications of the individual, or if a firm, its key employees.

Please reference our **BST Background and Team Member** section below, where we provide the education, training, and qualifications of key personnel/BST Directors who may be made available County of Hawai'i projects.

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- 4) A list of recent projects and the names of up to five clients who may be contacted, including at least two for whom services were rendered during the preceding year.

The following BST Client references for our projects may be contacted to provide you with testimonials to BST's work. We have also provided project details in the section entitled **Relevant BST Web-based Client Projects** below.

- **Gregory Dikilato; State of Hawai'i HIDOE, eHR System** (*see project description below*), Office of Talent Management, Personnel Development Branch; Phone: 808-441-8374; Email: greg.dikilato@k12.hi.us
- **Glenn Kunitake; State of Hawai'i HIDOE, eHR System** (*see project description below*), Office of Talent Management, Personnel Management Branch; Phone: 808-441-8345; Email: glenn.kunitake@k12.hi.us
- **Felicia Villalobos; Hawai'i Teacher Standards Board (HTSB), License Management System** (*see project description below*); Phone: 808-586-2602; Email: felicia.villalobos@hawaii.gov
- **Steve Sakamoto, State of Hawai'i, Department of Health, Chief, Health Information Systems Office, Various Custom-developed Systems** (*see project descriptions below*), Phone: 808-586-4450; Email: Steve.Sakamoto@doh.hawaii.gov

- 5) Any promotional or descriptive literature which the individual or firm desires to submit.

Please reference our **BST Background and Team Members** section below where we provide detailed information about the solutions and services we provide and bios of our key team members.



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Mahalo for the opportunity to submit our Statement of Qualifications and expression of interest in providing services in the areas of Human Resources Management Systems (HRMS), Enterprise Resource Planning (ERP), Healthcare, Human Services, and Licensing.

We can be reached at (808) 537-3853 or via e-mail at kevin.costa@bstusa.com, and look forward to speaking with you in further detail about our capabilities and services.

Sincerely,

A handwritten signature in dark ink, appearing to read "John K. Weldon", is written over a light gray circular stamp.

John K. Weldon

President

BST BACKGROUND AND TEAM MEMBERS

Business Solution Technologies (BST) is a Hawai'i-based consulting firm that provides strategic, operational, and technology solutions focused in the areas of Human Resources (HR), Education, Healthcare and Human Services.

During our 27 years in business in Hawai'i, Business Solution Technologies been particularly known for our work with large-scale human resources information systems (HRIS), and we have built a team of highly trained and specialized consultants in response to a growing need for Hawai'i-based solutions. We have since expanded our services and technical expertise in specific and emerging Human Resources Information Systems (HRIS) and related technologies in the Education, Healthcare and Human Services sectors.

BST provides forward-facing web sites for web-based access to business analytics, employee benefits, on-boarding and communication of personnel-related information applications and systems. Usability, security, and accessibility controls are core design and development considerations to address usability and the sensitive nature of information contained in many of the systems.

BST has provided migration and modernization for numerous clients from client-server and other legacy environments to internet-based, SOA applications. We have deployed many web-based Employee Self Service, Manager Self Service, and Workflow applications in the areas of Education, HR, Benefits, Payroll, Time & Attendance and Financial Reporting. BST and our partners are hosting web applications for industry areas including major auto dealerships, property management systems, remote access, and healthcare on over 150 servers.

BST has provided the following Web Technology Services:

- > LAMP application development stack (Linux, Apache, MySQL, PHP)
- > Oracle Fusion Middleware stack (JDeveloper, ADF and JHeadstart)
- > Microsoft .NET/MVC/Entity Stack (Visual Basic, C#)
- > Oracle PeopleSoft Architecture
- > ADP Enterprise Internet Architecture
- > Corporate Intranets
- > Employee Self Service
- > Manager Self Service

- > Content Management services (WordPress, Drupal)
- > LDAP/Active Directory/Single-Sign-on (SSO) Integrations
- > Web-based Workflow
- > Web application design/development/customization
- > Service Oriented Architecture
- > Web Services (XML/SOAP, JSON/REST)

Our projects also include strategic direction, the design, development, implementation and upgrade of information systems, analytics and reporting, integrated data, training, and tools. We also provide functional consulting, project management, business process mapping and design, and change management solutions to support our project efforts. BST provides the full suite of services required for Enterprise Resource Planning (ERP) and related projects, and we offer Human Resources Services that address both the strategic and operational requirements for large human resources departments.

Relevant BST Web-based Client Projects

The following is a sample listing of BST's clients and a relevant listing of BST's recent web-based projects.

- State of Hawaii, Department of Education
- State of Hawaii, Department of Health
 - > Women, Infants and Children (WIC) Services Branch
 - > Adult Mental Health Division (AMHD)
 - > Child and Adolescent Mental Health Division (CAMHD)
 - > Alcohol and Drug Abuse Division (ADAD)
 - > Developmental Disabilities Division (DDD)
- State of Hawaii, Department of Human Resources Development
- State of Hawaii, Employer-Union Health Benefits Trust Fund (EUTF)
- State of Hawaii, Judiciary
- University of Hawaii
- Research Corporation of the University of Hawaii (RCUH)
- Hawaii Teacher Standards Board (HTSB)
- First Hawaiian Bank
- The Queen's Health Systems
- Punahou School

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- Kamehameha Schools
- Outrigger Hotels and Resorts
- Hawai'i Pacific Health
- Kaiser Permanente
- Hawaiian Airlines
- HMSA
- Foodland Supermarkets
- Castle & Cooke
- Hawaiian Host
- Catholic Diocese of Honolulu
- Catholic Charities Hawai'i; and
- Goodwill Industries of Hawai'i, Inc.

Sample of BST's web-based client projects

The following projects show a range of web-development services we believe may benefit the County of Hawai'i.

- **Hawaii Teacher Standards Board (HTSB), Development of new License Management System and Public Web Site**
BST designed and developed a new teacher licensing management system to allow prospective teachers to apply for initial license, and for existing teachers to manage an existing license or add teaching fields. The system allows HTSB staff to review license applications for approval, provide reports to the HTSB Board, Board of Education, State Legislature, and other agencies.

The public web site allows HTSB to provide access to prospective teachers' information about becoming licensed in Hawaii, and for the public to check on the license status of a teacher.

BST supports the exchange of information between HTSB and HDOE such as teacher license, highly qualified teacher status, employment status and other relevant information. This information can be used in the assessment of student progress over time as it relates to the qualifications and status of each teacher assigned to teach in Hawaii's public schools.

Technical Environment:

Infrastructure Technology

AWS Cloud Virtual Servers

Microsoft Windows Server 2019

Apache Server 2.4

PHP 7 / PHP Slim 3

JasperReports Java Library 6

MySQL Database 5.7

Bootstrap 3 / jQuery 11 / jQuery Datatables

Microsoft Azure DevOps Git

Development Tools

NetBeans IDE

MySQL Workbench 6.3

Atlassian SourceTree Git Client 2.6

- **2021 HIDOE eHR System Enhancement for COVID Response: Vaccination Status and Telework Reporting** A recent example of a time-sensitive enhancement to the eHR system occurred in August 2021 when BST designed and implemented enhancements to the human resources system to enable HIDOE employees to self-report their vaccination status and if applicable, their COVID test results.

HIDOE employees can submit their vaccination status or test results by logging into the HIDOE secured network where employee will answer a series of questions and upload related documents. In addition, HIDOE's leadership and COVID Response Team have access to reports to monitor information and respond as needed. BST designed the application with an automated workflow and associated email notification system to ensure the appropriate information was shared with the right people.

This initiative was developed in direct response to Governor David Ige's Aug. 5, 2021, Executive Order that requires all State of Hawaii employees to be vaccinated or submit weekly COVID test results. BST was able to go live with the enhancements in 10 days to meet the state's August 16, 2021, deadline. Earlier in the pandemic, BST built an application for HIDOE to track, and report telework requests as the remote learning model was implemented across the state and employees were under a "Safer at Home" emergency order.

During each module implementation of the eHR, BST worked with the user community and the support staff to train them on not only the administration of the eHR system in the implementation of the module, but also the technical components of the implementation. BST worked extensively in the transferring knowledge of the eHR technical components to the support personnel; this transfer of knowledge continued with each successive eHR module rollout or revision as required by the user community. BST also worked with the users and technical staff to train them in operational support as well as in establishing procedures so that these requirements can be met in the future.

Technical Environment:

Infrastructure Technology

DOE On-premise Servers

Oracle Enterprise Linux 6 64bit

Oracle Application Server 10G

Oracle ADF 10G with JHeadstart

JasperReports Java Library 6

Oracle Enterprise Database 11G

Development Tools

Oracle JDeveloper 10G

Oracle SQL Developer 4

Subversion 2

Jasper Studio 6

Jenkins Continuous Integration Server 2

- **State of Hawai`i, Department of Health, Adult Mental Health Division (AMHD), Firearms Search Application**

BST designed and developed the Firearms Search Application for a Master Patient Index (MPI) which allowed DOH staff to quickly respond to requests from various Police Departments around the State regarding AMHD treatments or services that were provided to a firearms applicant. The MPI information is used as part of each Police Department's background check process to determine if the applicant is legally able to acquire or own firearms in Hawai`i.

The Firearms Search Application has allowed DOH to streamline the process of searching, identifying, and documenting whether firearms applicants have had any

AMHD treatments or services by aggregating multiple disparate data stores and allowing DOH staff to search across them easily via a modern web user interface.

Technical Environment:

Infrastructure Technology

Microsoft Azure Cloud Virtual Servers

Microsoft Windows Server 2019

Microsoft IIS 11

Microsoft .NET MVC 5 with Entity Framework

Microsoft SQL Server

Bootstrap 3 / jQuery 11 / jQuery Datatables

Development Tools

Microsoft Visual Studio

Microsoft SQL Server Management Studio

- **State of Hawaii, Department of Health (DOH) Public Health Preparedness Program Employees Skills Management System (ESMS)**

BST developed and implemented this web-based, self-service data collection and tracking of DOH employee skills, which is an important DOH resource in the event of public health emergencies or disaster. The system includes built-in ad-hoc reporting, automated email alerts and notifications. The survey questions and responses are fully customizable by administrative staff without the need for technical support. Our efforts included:

- > Replacing the custom ESMS authentication and authorization mechanism by integrating the application to the DOH Active Directory LDAP using Microsoft .NET libraries; and
- > Enabling LDAP search across all DOH AD domains real-time to allow users to login to the application using AD credentials which dramatically reduced the volume of technical support calls from users who didn't remember their old custom ESMS login and passwords.

Technical Environment:

Infrastructure Technology

Microsoft Azure Cloud Virtual Servers

Microsoft Windows Server 2019

Microsoft IIS 11

Microsoft .NET MVC 5 with Entity Framework
Microsoft SQL Server
Bootstrap 3 / jQuery 11 / jQuery Datatables

Development Tools

Microsoft Visual Studio
Microsoft SQL Server Management Studio

- **State of Hawaii, Department of Health (DOH) ESMS Site Security**

BST replaced a stand-alone security system built into the ESMS web application that was initially designed by DOH and built by BST. The ESMS is being upgraded with a link to the DOH Active Directory system for the purpose of allowing DOH staff to use a single and pre-existing user ID and password combination to access the ESMS application.

Technical Environment:

Infrastructure Technology

Microsoft Azure Cloud Virtual Servers
Microsoft Windows Server 2019
Microsoft IIS 11
Microsoft .NET MVC 5 with Entity Framework
Microsoft SQL Server
Bootstrap 3 / jQuery 11 / jQuery Datatables

Development Tools

Microsoft Visual Studio
Microsoft SQL Server Management Studio
Microsoft Azure Active Directory API

- **State of Hawaii, Department of Health (DOH) Cash Balancing System**

BST developed a custom Microsoft .NET based Cash Balancing System to automate and streamline the DOH Cash Balancing process. This project involved obsoleting the legacy Microsoft Access database system by performing ETL into the new SQL Server database and developing web-based user interfaces to allow DOH Accounting staff to manage daily cash balances for use by the Accounting Office.

Technical Environment:

Infrastructure Technology

Microsoft Azure Cloud Virtual Servers
Microsoft Windows Server 2019
Microsoft IIS 11
Microsoft .NET MVC 5 with Entity Framework
Microsoft SQL Server

Development Tools

Microsoft Visual Studio
Microsoft SQL Server Management Studio

- **State of Hawaii, Department of Health (DOH) Tax 1099 System**

BST developed a custom Microsoft .NET and SQL Server based Tax 1099 Vendor Management System to maintain and automatically generate 1099 MISC, 1099 INT, and 1099 NEC forms to various DOH vendors annually and report the 1099 data back to the IRS electronically. It allowed DOH to migrate off an old FoxPro system by creating a new, secure web-based platform.

Technical Environment:

Infrastructure Technology

Microsoft Azure Cloud Virtual Servers
Microsoft Windows Server 2019
Microsoft IIS 11
Microsoft .NET MVC 5 with Entity Framework
Microsoft SQL Server

Development Tools

Microsoft Visual Studio
Microsoft SQL Server Management Studio

- **State of Hawaii, Department of Education (HIDOE) eHR for HQ system.**

BST built the HQ for eHR (Highly Qualified Teacher Reporting System and Web Application - eHQ) using Oracle Developer, JDeveloper, SQL Developer, and iReport leveraging Javascript and Highcharts, Datatables, and other Javascript Libraries to present a modern web 2.0 user interface. This application supports State Department of Education and Required Federal Reporting of Highly Qualified Teacher Status and Teacher Qualifications including operational dashboards and trend analysis information organized and presented using role and location-based security to show appropriate and applicable information to site users. BST functional staff not only coordinate client user

acceptance testing periods, but also conduct separate usability testing to confirm that requested changes to the system work as expected.

Technical Environment:

Infrastructure Technology

DOE On-premise Servers
Oracle Enterprise Linux 6 64bit
Oracle Application Server 10G
Oracle ADF 10G with JHeadstart
JasperReports Java Library 6
Oracle Enterprise Database 11G

Development Tools

Oracle JDeveloper 10G
Oracle SQL Developer 4
Subversion 2
Jasper Studio 6
Jenkins Continuous Integration Server 2

- **HIDOE Special Populations Reporting System**

BST designed, developed, and supports the Special Populations Reporting System and support staff for daily reporting use. This allows HIDOE personnel to view online dashboards containing the intersection of student and staff information consolidated from different source systems related to English language learner needs and those qualified to support them. Staff can download and print out reports based on the information they see on screen. The Special Populations data integration provides the HIDOE information necessary to support this student population and meet Federal reporting requirements for funding.

The Special Populations Reporting System integrates information from the following HIDOE systems:

- > Professional Development: **Educate, Empower, Excel (PDE³)** data covering professional development courses and annual teacher evaluation scores.
- > **Infinite Campus** provides teaching assignments linking teachers to students.
- > **Azure Active Directory** handles employee login authentication.
- > **Casual Personnel system** provides information on non-salaried employees for report consolidation with the salaried personnel that eHR manages.

- > And from the **Hawaii Teacher Standards Board** for licensing information on Hawaii's public teachers.

The Special Populations Reporting System provides reports to support the following initiatives:

- > eHR personnel information, educational qualifications, work history and teaching assignments sent to the Hawaii Teacher Standards Board.
- > eHR personnel information provided to HIDOE's longitudinal data systems to support Federally mandated reporting.
- > eHR personnel status, position, and work location to Azure Active Directory to provision security access to all other HIDOE systems

Technical Environment:

Infrastructure Technology

DOE On-premise Servers
Oracle Enterprise Linux 6 64bit
Oracle Application Server 10G
Oracle ADF 10G with JHeadstart
JasperReports Java Library 6
Oracle Enterprise Database 11G

Development Tools

Oracle JDeveloper 10G
Oracle SQL Developer 4
Subversion 2
Jasper Studio 6
Jenkins Continuous Integration Server 2

- **Research Corporation of the University of Hawaii (RCUH)**

BST built functionality for a website that allows RCUH management access to the various HRIS subsystems, including Principal Investigators/Fiscal Officers' & Employee Self-Service that enables new hires and rehires to enter in required information to complete the hire process (Tax Withholding information, benefit selections, etc.). The software environment at RCUH includes Weblogic, Tuxedo, Oracle Application Server, PeopleSoft and PeopleSoft Tools, Subversion, Oracle SQL Developer and JDeveloper.

Technical Environment:

Infrastructure Technology

RCUH On-premise Servers
Microsoft Windows Server 2016
Oracle Weblogic Application Server 11g R2
Oracle Tuxedo
Oracle Application Server
PeopleSoft Enterprise Human Capital Management
Oracle Database

Development Tools

PeopleSoft HRMS
PeopleSoft Enterprise PeopleTools
PeopleTools
SQL
Oracle SQL Developer
Oracle JDeveloper

BST Information Technology Services

In addition to our web-based solutions, BST provides the following technology support in the Human Resources, Education, Healthcare and Human Services, and Government Services areas to meet your organization's business IT objectives. BST is a HIPAA certified business associate and BST staff understands and receives training around security and data sensitivity associated with HIPAA and FERPA (education).

Systems Implementation

BST provides in-depth expertise in building large-scale systems that is required for a successful systems implementation.

- > Project Management
- > Business/Requirements Analysis
- > Business Process Design
- > Application Development
- > Database Design
- > Deployment and Change Management
- > Application Quality-Assurance and Usability Testing
- > System Performance and Load Tuning

Systems integration

BST has extensive experience integrating premise-based, cloud-based, and hybrid applications to unlock the power of connecting systems through shared data in the following areas:

- > Enterprise Application Integrations
- > Data Integrations / Extract, Transform, Load (ETL)
- > Web Services and Application Programming Interfaces (API) Connections
- > Electronic Document Integration/Interchange (EDI) Implementations
- > Database Architecture and Modeling Analysis
- > Analytics and Business Intelligence Analysis
- > Artificial Intelligence Platform Integrations

Information Technology Strategic Planning

BST provides IT Strategic Planning services to all of our clients. We consider this one of the key factors to the success of any information systems project. BST has provided Strategic Planning services to our clients for many years, including Capital Planning/Budgeting, IT Department Reorganizations, Return on Investment Analysis and Workforce Planning. For example, we have helped our clients transition from legacy mainframe-based environments to cost-effective virtualized environments. In other cases, we have assisted our clients through strategic reorganizations.

Systems Planning

BST will help you with your:

- > Long-term and short-term planning, product analysis, evaluation and selection,
- > Database and application maintenance and support
- > System customizations, upgrades, or migrations,
- > Adoption and change management, and
- > The on-going training of your functional and technical staff or any other related area in which you may need assistance.

Data and Programming Standards

Developing and enforcing data and programming standards brings many benefits to project implementations and beyond. These help to minimize miscommunication during the project, standardize training requirements, and aid in the onboarding of new personnel and cross-training of personnel who transfer from one application area to

another. Standards also help to minimize your long-term production support costs by reducing the re-analysis and reverse engineering time required to support programs during staff transitions.

Licensing Management System

BST custom developed a cloud-based licensing system that is used by the Hawai'i Teacher Standards Board (HTSB) to manage teaching licenses required by State law to teach in Hawai'i's public schools. This License Management System (LMS) manages individual teacher licensing applications and their subsequent issued licenses and can be easily adapted and customized for other licensing management requirements.

Management Information System

BST has developed a cloud-based management information system Software-as-a-Service (SaaS) framework that is customizable and parameter-driven to provide flexibility to meet the needs of different organizations. It runs on an Amazon Web Services cloud infrastructure and is easily deployed for end-user access from a web browser on a desktop, laptop, tablet, or smartphone.

Development Environments, Associated Technologies, and Methodologies

BST has expertise with the following development environments, associated technologies, and methodologies:

- > Open-Source Web Application Architecture (LAMP)
- > Java and J2EE Architecture
- > Microsoft .NET Architecture
- > Service Oriented Architecture (SOA)
- > Web Services and API integration (XML, JSON, REST, SOAP)
- > HTTP Servers (Apache, Nginx)
- > Application Servers (Oracle WebLogic, Oracle Application Server, Microsoft Internet Information Server)
- > Database Development (Oracle, Microsoft SQL Server, MySQL, PostgreSQL)
- > Database Administration (Oracle, Microsoft SQL Server, MySQL, PostgreSQL)
- > Cloud Infrastructure (AWS, Microsoft Azure, Oracle Cloud)
- > Oracle Fusion Middleware Tools (JDeveloper, ADF, JHeadstart)
- > Oracle APEX Query Builder
- > Jaspersoft iReports and Business Intelligence Suite
- > Source Code Version Control (Subversion/Git/Team Foundation Server)

- > Issue Tracking (JIRA, Bugzilla)
- > PeopleSoft HRMS and PeopleTools
- > ADP Enterprise HRMS and Tools
- > Ceridian HRMS and Tools
- > Lawson HRMS and Tools
- > eHR Custom HRMS
- > J.D. Edwards
- > Kronos Time & Attendance
- > Microsoft Active Directory/LDAP Server
- > SQR, Crystal Reports and ReportSmith
- > Microsoft Programming Languages (Visual Basic/C++/Java)
- > Geospatial Markup Formats (KML/GML)
- > Microsoft SharePoint
- > Microsoft Project and Microsoft Project Server
- > GIS Systems
- > Battelle For Kids (BFK) Link
- > SQL Server Integration Services (SSIS - ETL, BIDS, Teradata, Dimension Merge SCD)
- > SQL Server Reporting Services (SSRS)
- > Microsoft PowerBI
- > Microsoft Visio
- > GUI Design Studio
- > Agile Development Methodology (including Scrum framework, Pair Programming Technique, etc.)
- > Waterfall Development Methodology
- > Spiral Development Methodology
- > PHP Laravel Framework
- > PHP Slim Framework
- > ITIL v4 IT Service Management

Enterprise Architecture

BST understands the value of a unified enterprise architecture to align business goals to IT objectives across an organization. With wide ranging capabilities in application development and infrastructure implementation, BST can improve systems standardization, reduce total cost of ownership (TCO), and lower risk management with strategic enterprise architecture services.

BST has provided the following Enterprise Architecture services to various clients:

- > Java and J2EE application and infrastructure implementation
- > Microsoft .NET application and infrastructure implementation
- > Oracle Middleware (ADF / Oracle Business Components) application and infrastructure implementation
- > Service oriented architecture (SOA) and web services API development/integration
- > Amazon Web Services / Azure Cloud Infrastructure-As-a-Service (IAAS) implementation
- > Server virtualization migrations using VMWare / Oracle VirtualBox
- > Enterprise web/application/load balancer server integration and support (Apache, Weblogic, IIS)
- > Database Modeling and Backend Systems Integration expertise (Oracle/SQL Server/MySQL databases)
- > Disaster recovery and systems backup planning and documentation
- > System performance tuning, scalability, high availability analysis and implementation
- > LDAP/Active Directory/Single-Sign-On (SSO) authentication and authorization integration
- > The Open Group Architecture Framework (TOGAF)

Data Management

BST has database administrators on staff with expertise in Oracle and Microsoft SQL Server. Since much of our development work is database-related, our systems analysts and software developers have a strong background in Oracle and SQL Server as well. Our data management activities are focused around the areas of Education, Human Resources, Financials, and Health IT.

BST has provided the following Data Management services:

- > Oracle 9i, 10g, 11g, 12c, 19c Database
- > MySQL Database 5
- > Microsoft SQL Server Database 2008-2016 and T-SQL
- > Microsoft Access
- > Database Administration
- > Physical Database Architecture
- > Logical Database Design
- > Backup and Disaster Recovery Planning
- > Database Performance Tuning

- > Database Maintenance and Upgrades
- > Data Governance
- > Data Architecture
- > Data Dictionary
- > Data Warehouse / Data Mart
- > Dimensional Modeling/Star Schema Design
- > Business Intelligence/Decision Support (Data Mining, Querying and Reporting)
including Jaspersoft Business Intelligence Suite
- > Cognos Suite
- > Longitudinal Data Systems
- > APQC Classification Framework
- > Data Cleansing
- > Data Normalization
- > ETL

Workflow Management

As the recent pandemic situation has shown, flexibility to support clients and staff is what is most needed to support government and business operations. Key to supporting improved online processing of applications, requests, and change notifications is an application's workflow engine. BST consultants have designed, developed, deployed, and maintain workflow management components of systems to transform paper-based transactions into streamlined, and easy-to-use online processes.

Electronic Fund Transfer (EFT) technologies

BST has performed the following services for numerous clients over 25 years including the Research Corporation of the University of Hawai'i, First Hawaiian Bank, Hawaiian Airlines, Foodland Supermarkets, HMSA, Castle & Cooke, Catholic Charities, Honolulu Catholic Schools, and Hawaiian Host.

- > Automated Clearing House (ACH) to use direct deposit to transfer net pay into employees' bank accounts
- > Electronic Fund Transfers (EFT) to transfer employee benefit funds to 403(b) and 401(k) Retirement Savings Vendors, Healthcare Insurers, Life/AD&D Insurers, Long Term Disability (LTD) Insurers, and Long-Term Care (LTC) Insurers
- > Automated ACH and EFT Reconciliation for the above-listed transactions
- > Retroactive ACH and EFT Processing for the above-listed transactions as needed

A recent example is the Hawai'i Teacher Standards Board (HTSB) new teacher licensing management system, which BST designed and developed, and continues to support. The system allows prospective teachers to apply for their initial license, and for existing teachers to manage their existing license. BST integrated Electronic Fund Transfer (EFT) functionality into the system to enable payment of license fees by teachers via credit card (such as Visa, Mastercard or Discover), debit cards, or PayPal accounts on the front-end; and the deposit of funds into the State of Hawai'i bank account on the back end.

ERP Services with an Emphasis in Human Resources Information Systems

Since our founding in 1996, BST has been known for our work with the human resources information systems (HRIS) component of EFP systems. Our team members have performed various HRIS implementations, upgrades, customizations, and production support for major HRIS releases. We have built a team of highly trained and specialized HRIS consultants, in response to a growing need for Hawai'i-based systems implementation and support. We have provided HRIS services and support for Hawai'i's largest organizations including the Queen's Health Systems, First Hawaiian Bank, the State Department of Human Resources Development, The Judiciary, The Research Corporation of the University of Hawai'i, and the University of Hawai'i. Our largest HRIS implementation supported organizational management of over 100,000 employees and over 200,000 total employees, dependents, and beneficiaries.

BST Support Services

BST also provides the following services in support of our client projects:

Project Management

BST provides project managers who have experience with large IT implementations and are trained in the Project Management Institute (PMI) methodology; we have incorporated adaptive/hybrid methodologies that factors meeting project requirements, best practices, and allows us to deliver a better-quality product that meets our client's needs. Our track record of completing projects on time and on budget is due in large part to our project management standards.

BST has repeatedly and successfully demonstrated the capability to provide project management support for large, complex, multi-participant, multi-year projects in Hawai'i.

BST's approach to project management and business analysis is firmly rooted in the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK) and the International Institute of Business Analysis' (IIBA) Business Analysis Body of Knowledge (BABOK). We believe that a solid background in business analysis makes a strong project manager even more effective. Our project managers have also been trained in numerous agile methods and frameworks like Scrum, Kanban, Scale Agile Framework (SAFe), etc.

BST has provided project management services for numerous large and complex multi-year projects, including:

- State of Hawai'i, Department of Education's eHuman Resources and Highly Qualified Teacher (eHR/eHQ) statewide system implementation.
- State of Hawai'i, Department of Health, WIC MIS T&I project
- The Queens Health Systems (QHS): numerous IT and operations projects

Business Process Re-engineering

Successfully implementing a new system, or improving an existing one, depends on a solid understanding of how the organization's work is currently being done, and what the 'best practices' are for how it can be done to better support the organization. BST consultants have years of real-world experience helping large organizations to implement 'best practices' for their systems. We approach the work using lean and continuous improvement methodologies.

Data Analytics

BST provides data analytics services to help clients determine the effectiveness of their technology systems and operational initiatives. We assist clients with verifying and using their data to identify trends and report key metrics that inform and support key business decisions.

BST also believes that once we assist with implementing IT systems and related processes it is equally important that the data provided by your systems assist you in making good, informed business decisions. We pay particular interest to data and data analysis to help you verify that your data is accurate and useful, and able to provide the information you seek.

Business Analysis

BST can provide business analysis services to help you understand what your data is telling you and how to use the data to identify and make improvements to processes, products, services, and software. BST uses the International Institute of Business Analysis (IIBA) methodology based on the Business Analysis Body of Knowledge (BABOK), which contains standard 'best practices' for business analysis.

Organizational Change Management

Organizational change management is an important part of any system implementation and adoption and must be actively addressed to assist staff in utilizing new and changing systems across your organization. Change management efforts can assist you in realizing full return on investment for planned and implemented systems. At BST, our teams leverage Organizational Change Management (OCM) using leading change management methodology frameworks.

This OCM process considers the full organization and what needs to change, while change management may be used solely to refer to how people and teams are affected by such organizational transition. It deals with many different disciplines, from behavioral and social sciences to information technology and business solutions. Our OCM approach addresses enterprise challenges by equipping leaders with the right strategies and tools, and individuals with the right information, motivation, and ability to successfully move through changes in the organization.

BST's Project Approach

BST always starts with understanding our client's objectives, work environment, available resources, and most importantly, what the project opportunities are. We take a holistic approach to every project, understanding the issue in front of us and how it connects to the larger organizational goal.

We start with an initial assessment to validate opportunities and concerns and we work with you to decide where to start. Our team members are equipped with technical and functional knowledge and analyze your current business landscape, while understanding how things could and should work. We arrive at projects and plans that move your organization forward in a logical, methodical, budget-friendly way.

We apply project management principles, remain flexible, keep updated on the latest technologies and industry trends and recommend improvements and enhancements as budgets and situations allow. Our team members have knowledge in a wide range of complimentary fields so there's never a shortage of possible solutions.

Key BST Team Members

Colin Yu, Director of Technology, has developed, implemented, and supported various applications for the State of Hawai'i, and designed and developed, and continues to support a licensing management system (referenced above) that is currently being used by the Hawai'i Teacher's Standards Board (HTSB) to support over 45,000 user profiles. The system allows HTSB management to review license applications for approval and provide reports to various stakeholders including the HTSB Board, Board of Education, State Legislature, and other agencies. The system also allows prospective teachers to apply for their initial license, and for existing teachers who are already licensed and accounted for within the system to manage information regarding their license. The system also includes a public web site, which allows HTSB to provide information about becoming licensed as a teacher in Hawai'i to prospective teachers and allows the public to check on the license status of a teacher by initiating a search with the teacher's name. Our licensing system was developed using a W3C-compliant PHP framework incorporating WordPress for web site text using a MySQL database, and Windows server platform. All are running on the Amazon Web Services platform as virtual servers. BST developed this system in 9 months from contract approval to 'go live' launch, including the conversion and clean-up of data from HTSB's prior vendor's system.

Colin has also designed and developed two custom web-based systems for the State of Hawai'i, Department of Health: Employee Skills Management System (ESMS) for the Office of Public Health Preparedness and the Firearms Search application for the Adult Mental Health Division – Master Patient Index (MPI). He improved the authentication functionality of the ESMS by integrating it with Azure Active Directory and has been providing critical technical support to the Cash Balance application for the Administrative Services Office.

Colin has over 23 years of experience in the IT industry and has previously worked with Hewlett-Packard and Accenture bringing with him a global and highly innovative perspective on the way BST approaches client solutions. Colin was part of the team to

launch the highly regarded Hewlett-Packard HP.com search and HP.com online capabilities. His leadership in the “One-Click Product Access” project and in the systems development life cycle for 77 search applications tremendously increased HP’s ability to service their online customers in a timely and relevant way, which ultimately led to increased share value for the company. **Education:** *Bachelor of Business Administration Degrees with distinction in Management Information Systems and Accounting, University of Hawai‘i at Manoa.*

Kevin Costa, BST Director, currently manages the BST development team activities and application support for various client systems. Kevin has over 35 years of experience with organizations including AIG Hawai‘i and First Hawaiian Bank and has provided project management and business application development solutions, including the eHR system developed by BST for the HIDOE. Kevin holds a Master of Science degree in Computer Information Systems from the University of Phoenix, Phoenix, Arizona, and a Bachelor of Business Administration degree in Management from the University of Hawai‘i at Manoa. He has excellent verbal and written communications skills as evidenced in his work as the onsite eHR project manager for BST over the last 12 years. **Education:** *Master of Science degree in Computer Information Systems, University of Phoenix, Phoenix, Arizona; Bachelor of Business Administration degree in Management, University of Hawai‘i at Manoa.*

Thomas Kagehiro, Senior Database Administrator is an accomplished database professional who has experience with all phases of Oracle applications planning, development and support, including database and applications upgrades. He has solid professional experience in consulting, project planning, architecture, applications development, data warehouse applications, performance tuning, systems analysis, and database design. **Education:** *Master of Science degree in Computer Science, Washington State University, Pullman Washington; Bachelor of Arts Degree in Mathematics/Philosophy, Whitman College, Walla Walla, Washington.*

Kim Tengan, BST Technical Consultant has experience in both developing and maintaining applications, most notably in the education sector for Business Solution Technologies. She has automated annual cycle-related processing, managed batch database jobs, converted paper-based applications to an online format, built and modified screens, analyzed and imported data from various sources, and built data validations. Kim is also a native of Hilo,

Hawai`i, and graduate of the University of Hawai`i Hilo Campus. **Education:** *Bachelor of Science in Information Computer Science, University of Hawai`i at Hilo.*

Simon Wong, BST Technical Consultant has software development experience in the education sector with Business Solution Technologies. Simon is currently working at the State of Hawai`i, Department of Education providing optimizations and fixes for DOE's HR web application including recruitment, highly qualified teachers, online application, employee transaction and workflow processes. He created the recruitment eligibility function to support a Teacher Assignment and Transfer Program Pilot and simplify the work of the hiring manager. He also optimized report generation processes from up to 12+ hours to less than 2 hours and pioneered the transition for nightly DOE HR data processes to a more supportable and easier to manage Oracle scheduler.

His technical experience spans across all layers, from database to services to user interfaces and functional knowledge of the education industry includes recruitment, highly qualified teachers, HR application and workflow processes. Simon has worked on projects for the State of Hawai`i Judiciary. **Education:** *Bachelor of Science in Information Computer Science, University of Hawai`i at Manoa.*

Chris Nelson, BST Technical Consultant has software development experience in the education sector with Business Solution Technologies. He is currently supporting the State of Hawai`i, Department of Education's electronic human resource application. He has development key components of the Temporary Assignment tracking process that HIDOE uses for staffing during position vacancies, and routinely handles import processing support for professional development courses taken by staff which determine highly qualified status designations for those support Hawai`i's students. Chris is a native of Hawai`i Island and graduated from the University of Hawai`i – Hilo campus with a degree in Computer Science. **Education:** *Bachelor of Science in Information Computer Science, University of Hawai`i at Hilo.*