



PRODUCT TEAM SHOWCASE

Case Studies

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KEY TECHNOLOGIES

Languages / Tools:

- Javascript / Typescript / ECMAScript
- Node.js
- PHP
- Java
- Grails
- C# / .NET 6
- Embarcadero Delphi
- HTML 5
- CSS 3
- SASS / SCSS / LESS
- SQL / T-SQL
- Ruby / Ruby on Rails
- Coffeescript
- Webpack
- NPM / Yarn
- BASH / SH / Unix Scripting
- LUA / TCL
- Swift
- Objective-C
- Perl
- Unity 3D

Frameworks:

- Serverless Framework
- Architect Framework
- Dot Net Core
- Express.js
- Angular / Angular.js
- React
- React Native
- Vue.js
- jQuery
- Joomla
- Drupal
- Slim Framework
- Yii
- Meteor

Online Platforms:

- Amazon Web Services (AWS)
- Microsoft Azure
- Google Cloud Platform (GCP)
- Wordpress
- Shopify

- Moodle Learning Management System (LMS)

- Heroku
- LiquidWeb
- GitLab
- Github

DevOps Platforms:

- CircleCI
- Jenkins
- Seed.run
- AWS Codebuild
- AWS Amplify
- Azure DevOps
- Azure Pipelines
- Terraform
- Puppet
- Ansible

Design Platforms:

- Figma
- Sketch
- Adobe Creative Suite
- Lucidchart
- Balsamiq

Servers and Software:

- Apache
- Nginx
- Microsoft Internet Information Services (IIS)
- Selenium
- Cucumber
- Hyperledger Fabric
- Metamask
- AWS Aurora
- MySQL
- PostgreSQL
- Microsoft SQL Server
- Azure SQL
- MongoDB
- AWS DynamoDB
- MariaDB
- Oracle
- AWS Quantum Ledger Database (QLDB)
- Docker
- Kubernetes
- Red Hat OpenShift
- SAP Ariba
- Salesforce CRM
- JSON
- XML / XSLT
- BonitaBPM
- Bubble.io

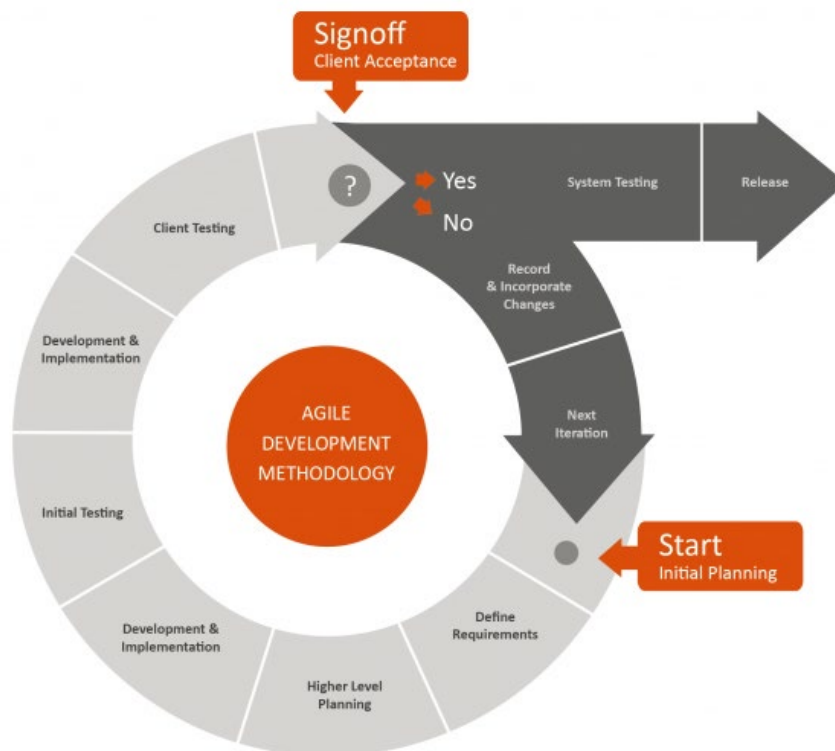
PROCESS ABSTRACT

1. Overview

1.1. General Process

Developing a product takes time and a clear concept of what needs to be created. Our product team has a solid track record of delivering enterprise class B2B systems. Over the last year, we've created several products. Some are internal systems for enterprise clients. Others are customer facing B2C systems.

Our process is Agile and iterative in nature. This basically means that we create increasingly robust versions of full applications on each cycle through the process. What gets released and what gets worked on in subsequent cycles is determined by the Product Owner and the Technical Lead ahead of time.



2. Process

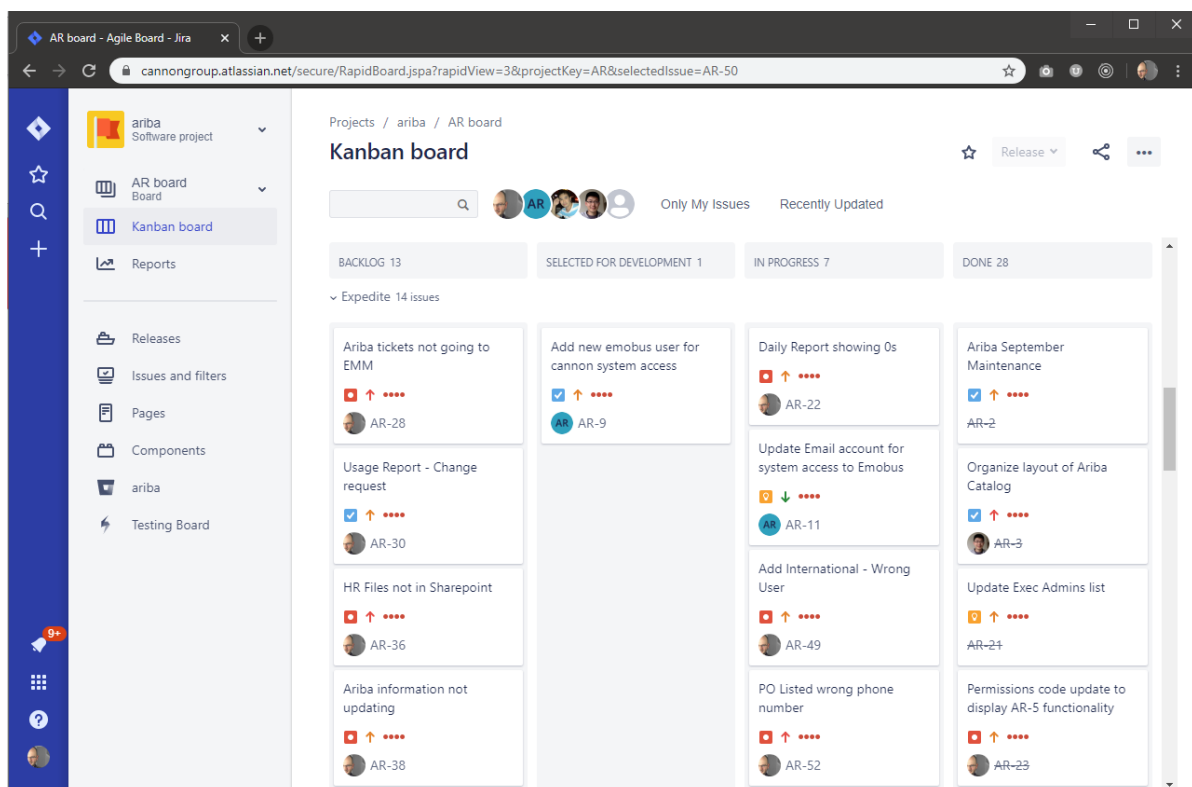
2.1. Agile Overview

With product development projects, our general approach is to first get a technical “lay of the land”, then sit down with individual staff members to define specific requirements.

Our development methodology is Agile in nature and allows us to modify a project while currently working on it. At any point a member of a client’s staff can make a request for new work to be done and record the details of that work in a backlog.

We generally ask for a single project owner from our clients. This allows us to take requests from any staff member, but to work on the highest priority items first. We, as developers, do not decide what is highest priority. The project owner sets the priority and we only work on the tasks that fit within the allocated time / budget.

This is represented using a Kanban board to clearly show what is current, what is completed, and what is still outstanding.



TERRAHUB SYNC CREDENTIAL WALLET

3. Overview

3.2. System Overview

The team at TerraHub had a vision to create a true blockchain based integration system for working with multiple external systems. Specifically, they wanted to create a credential management system to handle verification of individuals' achieved credentials. So, they came to us and asked us to create Sync.

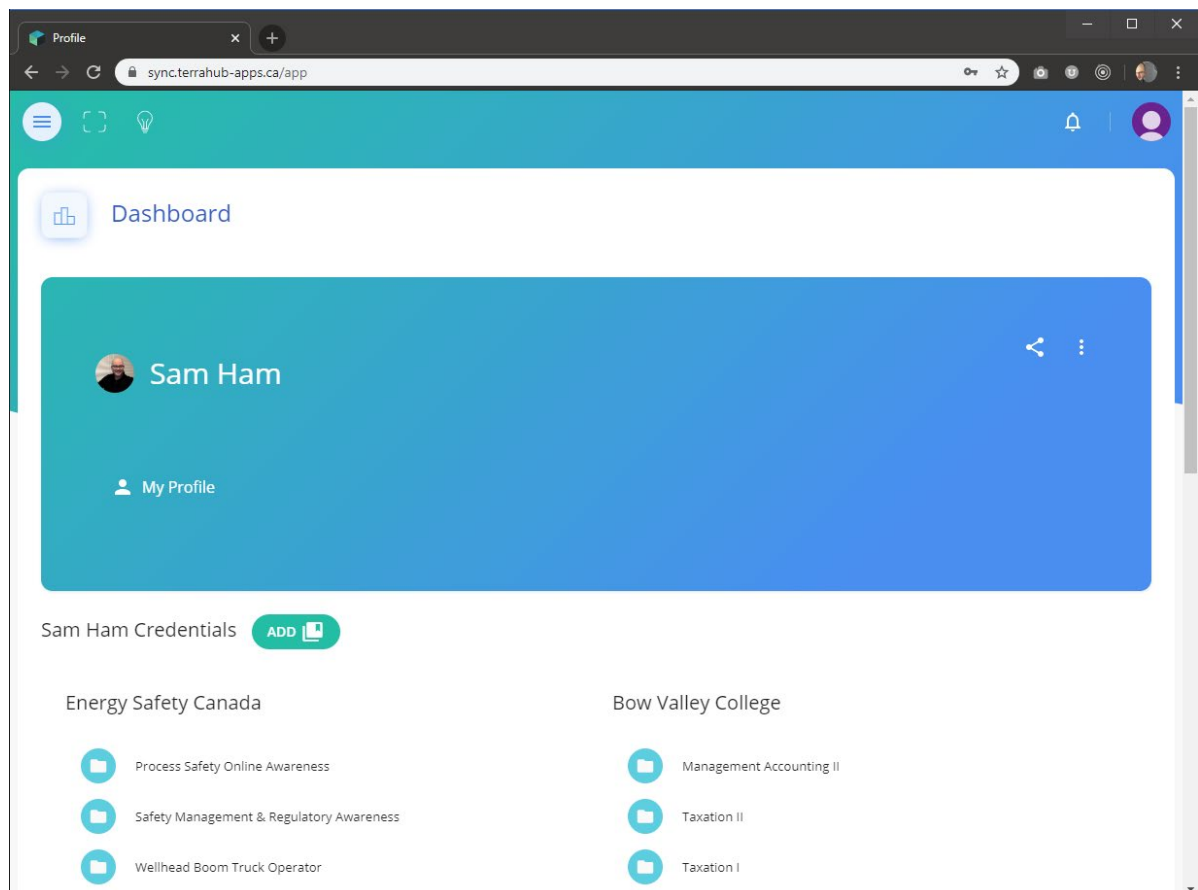
Sync is a universal platform for improving vendor compliance and certification, accounting audit and human decision making. As most enterprises already have core systems that process key business information, Sync is simply a “last mile” product that intelligently connects those systems and their users, using blockchain and artificial intelligence.

Credential Wallet, a module within the Sync Suite, connects the accreditor, the student/worker and the employer in a network that stays constantly up to date. This real-time, indisputable and tamper-proof software provides the individual with the ability to instantly share qualifications and education in the form of degrees, diplomas, accreditations and certificates. It comes with built-in intelligence and prompts for recertification based on expiration or geographic requirements, and AI biometric capabilities for authenticating users. From an employer's perspective, this becomes a strong value proposition for efficient workforce management: fit for duty, fast check-ins and required certifications of all workers who enter a work site. A manager will always know who is on site and if they meet the criteria to be performing a job.

4. Functional System Details

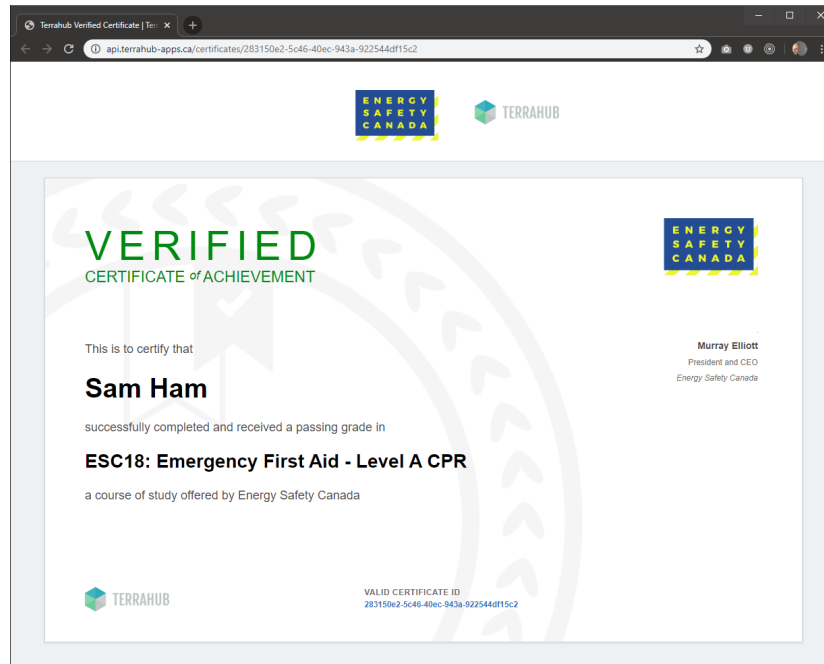
A case study is only useful if you can see examples of what the system looks like in production. This section shows screenshots and example workflows of data moving through the functioning system

4.3. System Functionality

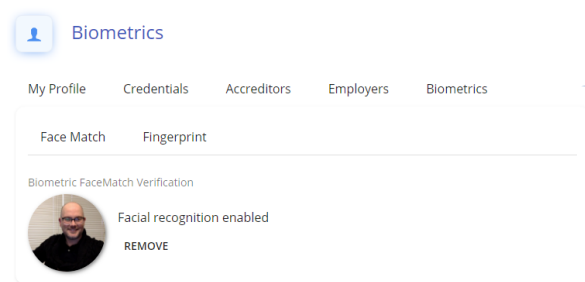


Users logging in have the ability to manage the credentials stored within their wallet. These credentials can then be shared with employers to confirm their job readiness. Additionally, specific credentials can be shared globally to allow a user to display their completed and verified competency on a system like LinkedIn or emailed directly to interested parties.

Each credential is verified by the accreditor that issued it using a blockchain to ensure that the data is valid and only from the correct source. Once a credential is validated, that information is displayed within the system and on the publicly visible credential page.

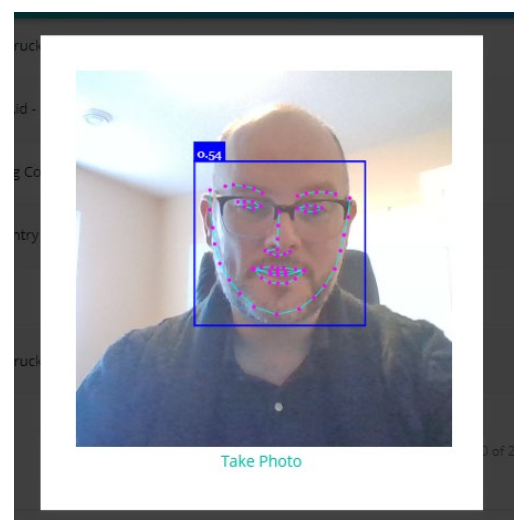


Data moving between Student Information Systems (at accreditors) and the Sync blockchain must have a request generated by a valid individual. Only the correct individual can request information on themselves. We have implemented this using a biometric verification system.



Verification is handled using AI executed using TensorFlow and verified using AWS Rekognition.

When the verified user request is returned, the data from the accreditor is confirmed and validated using the information on the Hyperledger Fabric blockchain.



CONTINGENT WORKFORCE MANAGER

5. Overview

5.4. System Overview

Cannon Group has been managing Subaru's telecom requirements successfully for many years. Subaru of America tasked them with managing the project costs for their distributed workforce – and they came to us to make it happen.

We needed to create a connection between the internal time tracking system (Oracle) and the submitted invoices. Then, we integrated their projects and cost coding schema. Once that was completed, the approval process flow was straightforward to create. Approval agents and project managers are notified of updates and can approve from both desktop and mobile devices.

5.5. Delivery Phasing

This initial level of effort evaluation was very short and simple. We looked at the current technical architecture, then we interviewed each key member of staff. Based on those interviews, we created a delivery schedule for the ongoing work based on what was highest priority (and what could be delivered fastest).

During any initial discussions, we are always looking for easy to implement “low hanging fruit” to quickly get traction. We rely on the project owner to help us identify those specific items that can produce the biggest return.

Simplified Project Phase Breakdown:

- Phase 1 (6 weeks):
 - Overview:
 - Integrate with internal data systems
 - Oracle Timesheets
 - Email PDF Invoices
 - Database Systems
 - Single Sign On
 - Create integrated web portal
 - Deliverable:
 - Portal to allow managers to view staff time corresponding to project hours
- Phase 2 (3 months):
 - Overview:
 - Ingest PDF information using meaningful line item data
 - Ingest timesheet information into platform database
 - Create permissions-based forms for management to view and approve data
 - Export Accounts Payable reports for approved invoices
 - Deliverable:
 - Portal displaying different levels of access based on org-chart data. Managers can approve information, data entry clerks can update data, accounting staff can export and view accounts payable reports.
- Phase 3 (6 weeks):

- Overview:
 - Improve the system to handle many different types of invoices
 - Update workflows to handle changing data (if an invoice is not approved because of missing timesheet data, update it when that data is entered)
 - Scale the system to process up to \$5M USD monthly
- Deliverable:
 - Portal that can be accessed and used by all managers within Subaru without need to interact with IT staff
- Phase 4 (ongoing) - Maintenance:
 - Overview:
 - Maintenance and ongoing update requests
 - Deliverable:
 - Stable system in use

6. Functional System Details

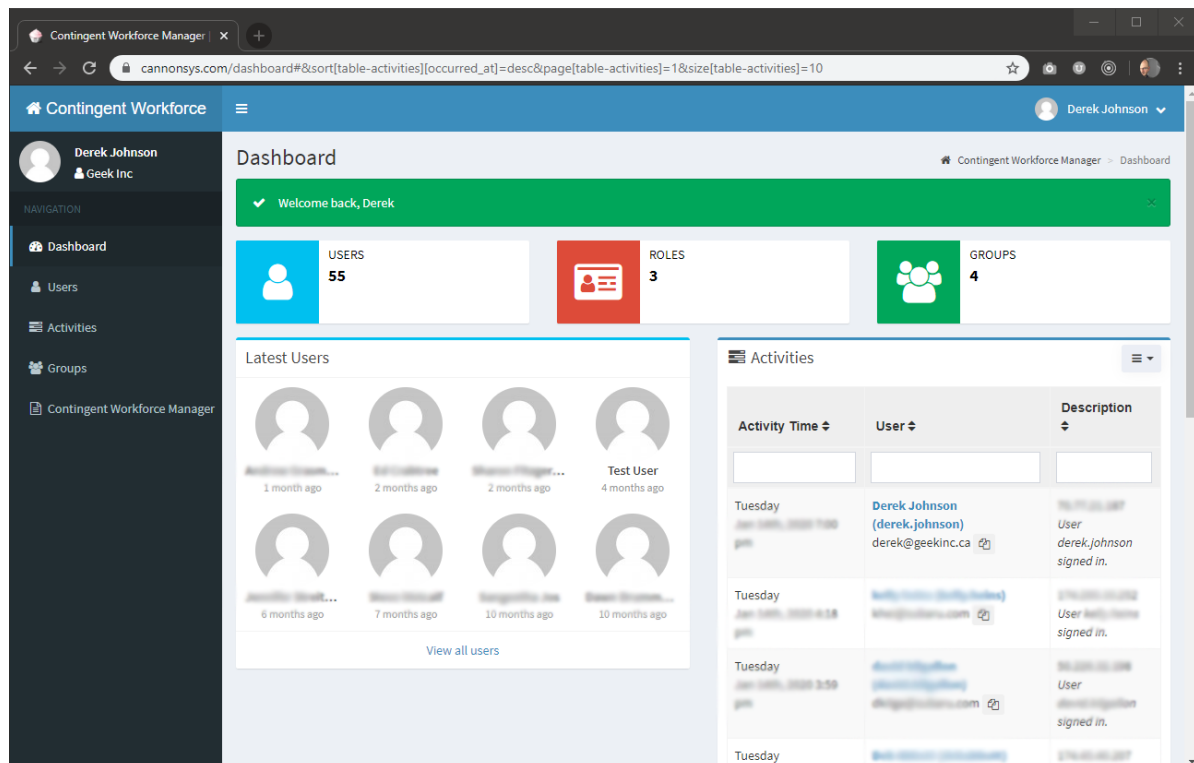
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6.1. Note on System Screenshots

Since the systems we are demonstrating are using real data, some of the information displayed in the screenshots have been obfuscated. Our clients' privacy is of paramount concern to us, we believe that the screenshots should show functionality without revealing private information.

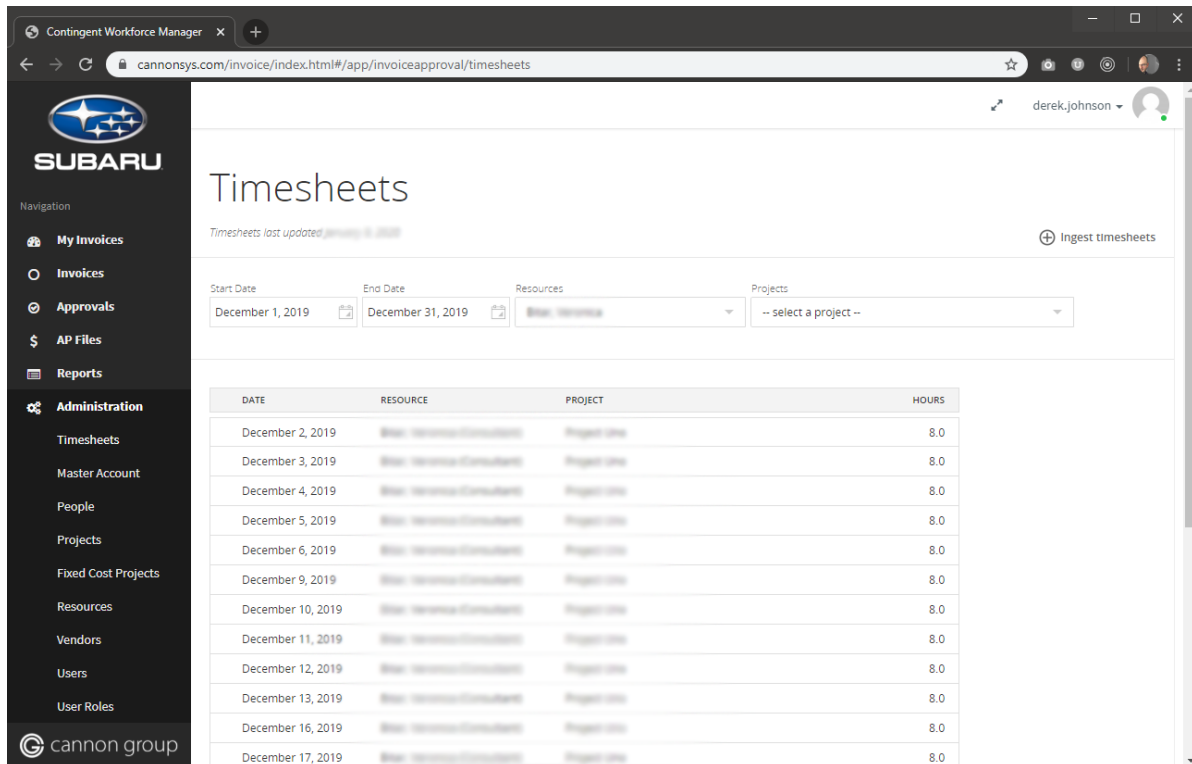
6.2. System Functionality

This software connects several systems together to allow project managers to approve their project's invoiced time. User management is integrated through the central SSO system allowing any new manager to easily login using their existing corporate credentials. Users and roles are managed through the application administration interface.



Administration of Users and Roles

Oracle E-Business Suite contains information about the current projects and the hours that each worker has tracked against them. The system extracts that information periodically and allows clerical workers and project managers to verify the time entered is accurate.



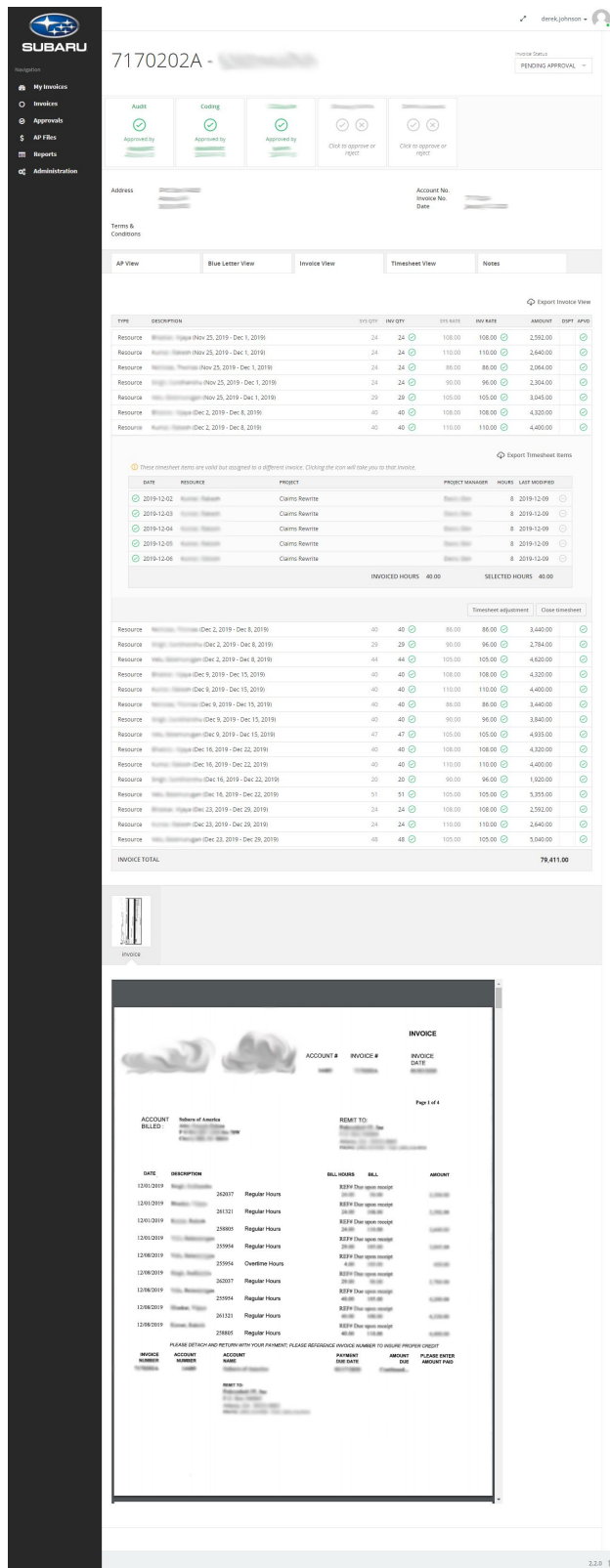
DATE	RESOURCE	PROJECT	HOURS
December 2, 2019	Bian Vermeire Consultant	Project 123	8.0
December 3, 2019	Bian Vermeire Consultant	Project 123	8.0
December 4, 2019	Bian Vermeire Consultant	Project 123	8.0
December 5, 2019	Bian Vermeire Consultant	Project 123	8.0
December 6, 2019	Bian Vermeire Consultant	Project 123	8.0
December 9, 2019	Bian Vermeire Consultant	Project 123	8.0
December 10, 2019	Bian Vermeire Consultant	Project 123	8.0
December 11, 2019	Bian Vermeire Consultant	Project 123	8.0
December 12, 2019	Bian Vermeire Consultant	Project 123	8.0
December 13, 2019	Bian Vermeire Consultant	Project 123	8.0
December 16, 2019	Bian Vermeire Consultant	Project 123	8.0
December 17, 2019	Bian Vermeire Consultant	Project 123	8.0

Timesheet Confirmation and Correction

Invoices are sent to a central email account (along with supporting documents). These invoices are ingested through a periodic polling mechanism.

Details of invoices are verified by clerical staff and passed to project managers to approve. A single invoice may have several PMs associated with it – as one invoice could cover work done for several projects.

Once invoices have been approved by all relevant project managers, they are then collated into a single Accounts Payable file which is then forwarded on to Accounting. A single payment for the total is approved and Cannon Group distributes the payments to each vendor according to the work invoiced and approved.



Invoice Approval Screen

The system as a whole has been a smashing success with project managers feeling empowered to manage their teams well.

The Accounts Payable team has been very pleased with the reduced workload. By having individual workers validate their own time against what was billed, there have been significantly fewer errors and those that have been entered were automatically caught by the system.

To date, \$47M has been processed through the system in over 2500 invoices (and all the supporting data).

385,942 timesheet entries have been processed collated against over 10,000 invoiced line items.

RBC AND UNITED WAY

7. Overview

7.3. System Overview

The Baylis Wealth Management Group of RBC Dominion Securities wanted to say thank you to their existing client base in a unique way. They set aside \$10,000 in \$50 increments to allow their clients to give to a local cause of their choice.

In the meantime, the United Way had kicked off its #unignorable campaign with nine key areas of influence.

By putting these two initiatives together, we were able to empower people to give in a deeply impactful way.

Our team put together the Goodpin platform to facilitate this #unignorable issues campaign.

Goodpin is a web-platform, empowering companies to put their funds in the hands of their customers, employees, and other stakeholders to give to the causes they care about. Giving together creates authentic relationship, and that affects everything that happens next.

By enabling companies or organizations to put their charitable dollars in the hands of their customers, employees or other stakeholders – the Goodpin platform facilitates the entire online charitable giving process.



8. Functional System Details

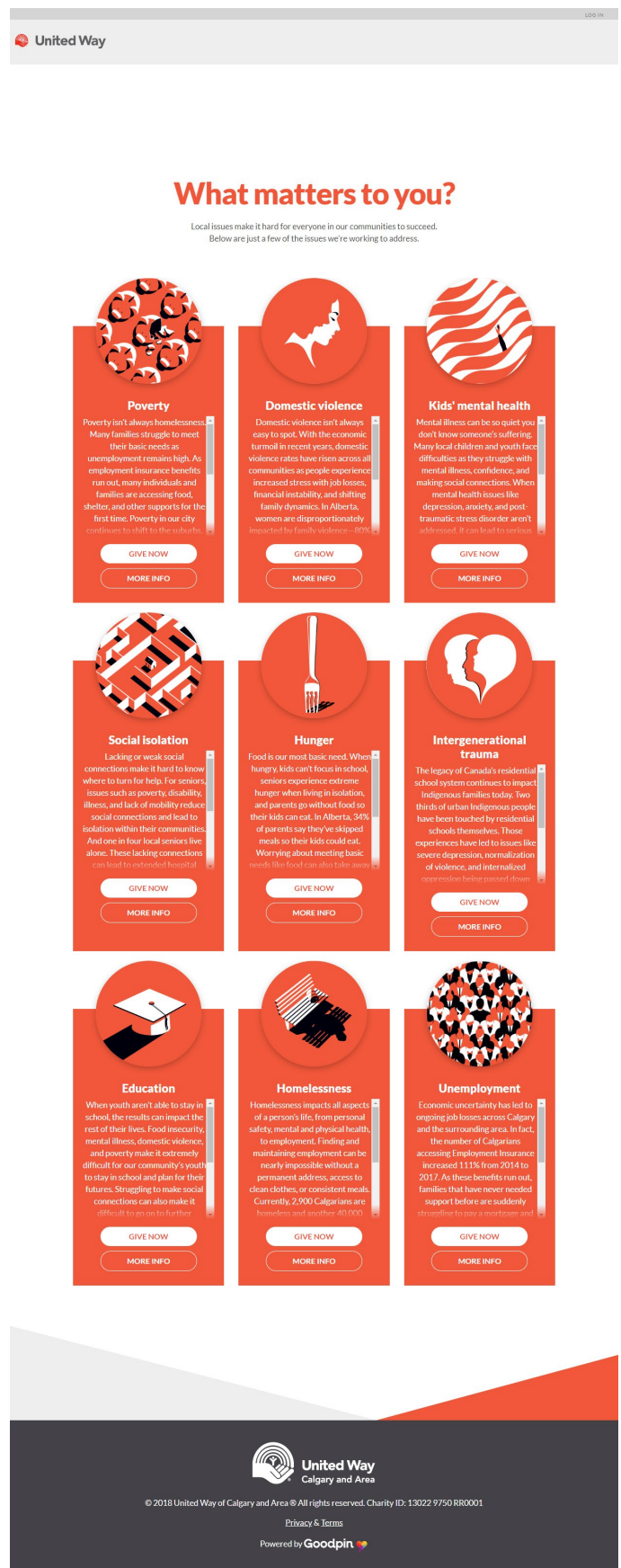
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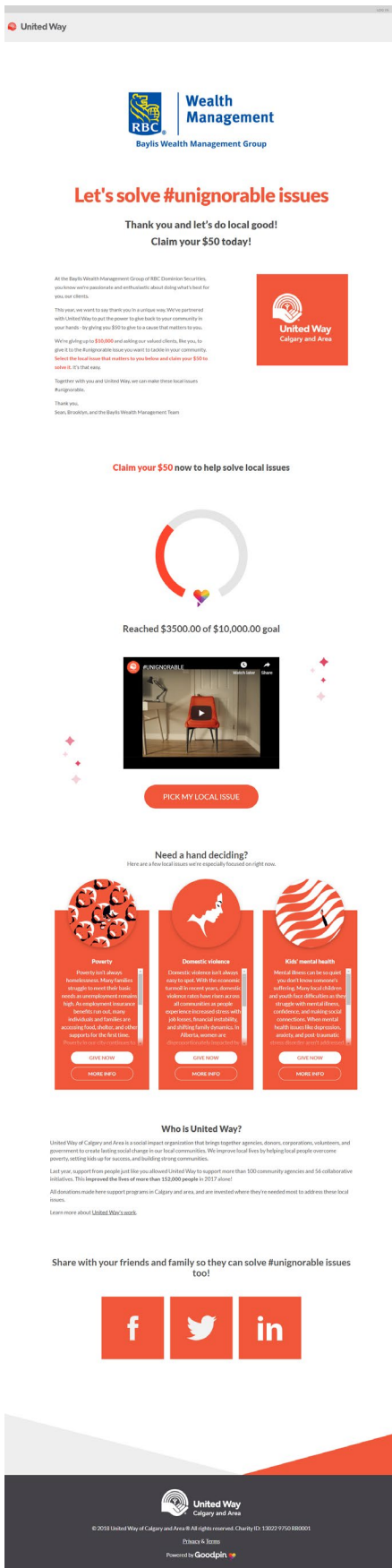
The basic principal behind this system is to facilitate giving in a meaningful way. Small and mid-sized organizations can set aside a specific amount of money to be given to charities and their employees (or other key people) can then earmark where those moneys go.

8.4. System Functionality

Emails are sent out to a specific group of individuals and they are then able to click through to select a specific cause to support.

Once a user has clicked through to support their cause, they are presented with the option to give a bit of their own money, in addition to the amount earmarked by RBC.





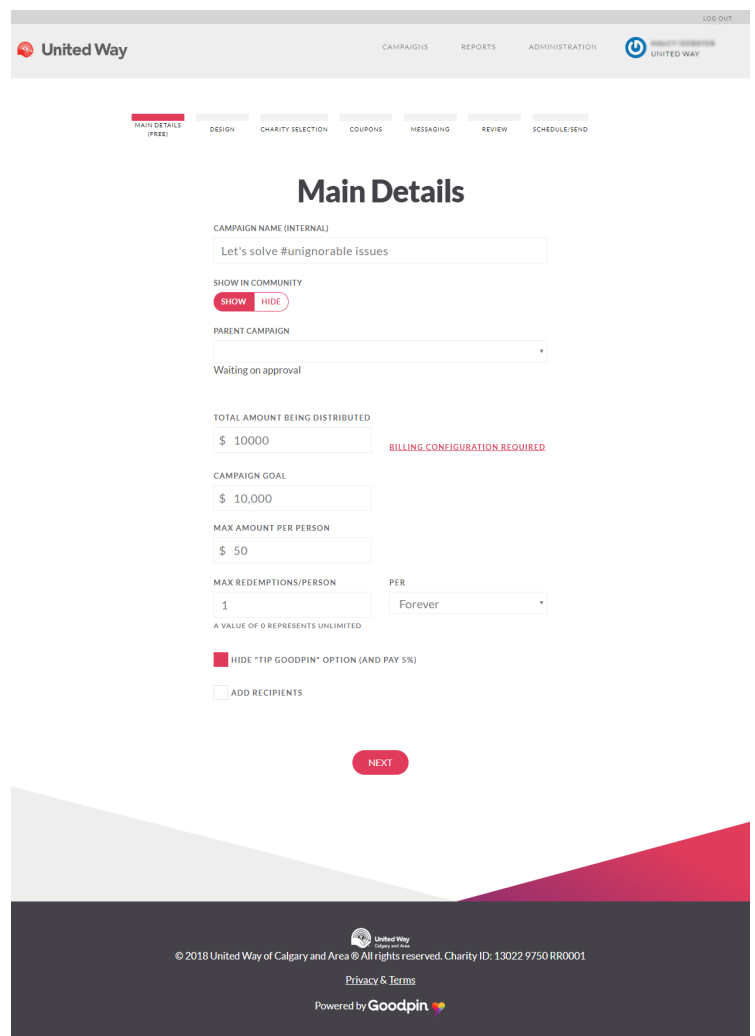
This campaign had \$10,000 set aside to give through the United Way of Calgary.

Select RBC clients could choose where to send donations (in \$50 increments).

From there, they could share the details with their friends and associates on social media.

The RBC Baylis Wealth Management Group team was able to configure and update their campaign details easily and add groups of individuals to be invited to give.

The details of the process could then be exported back to them for reporting purposes.



ADT SAP Ariba PUNCHOUT AND REPORTING

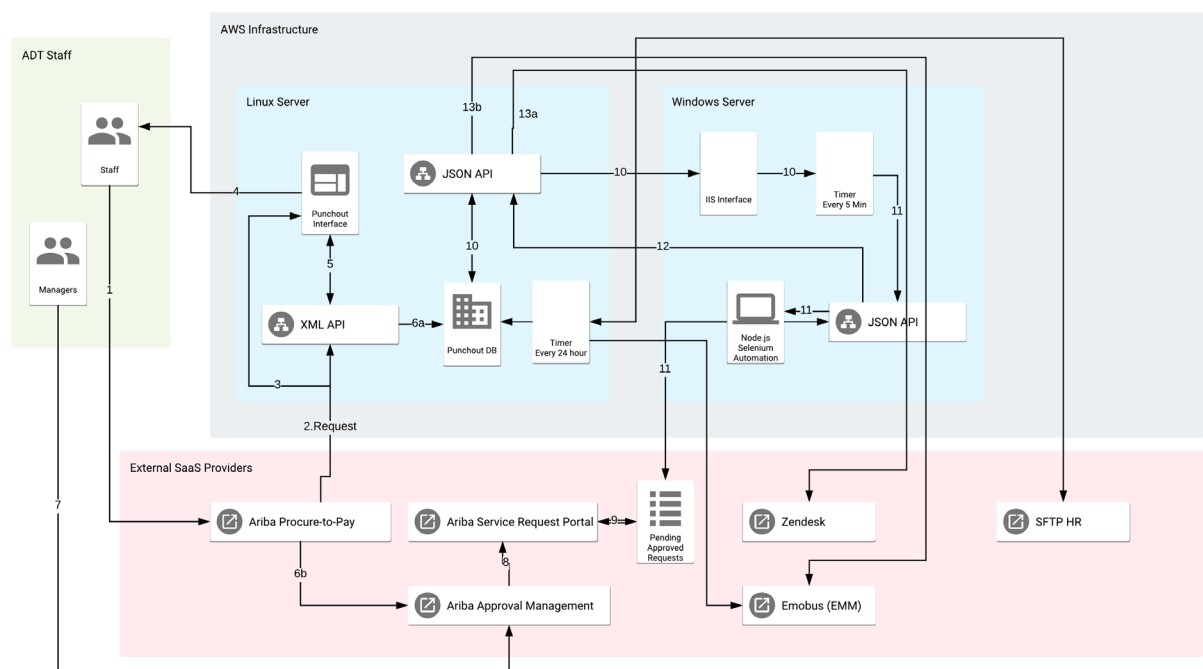
9. Overview

9.5. System Overview

ADT required a central system to request new mobile devices (phones and tablets) and to make service requests on those devices. SAP Ariba offered the enterprise infrastructure, but not the integration with the third party device dealers.

We created the system to integrate with the dealers using a punchout catalog with usage reporting.

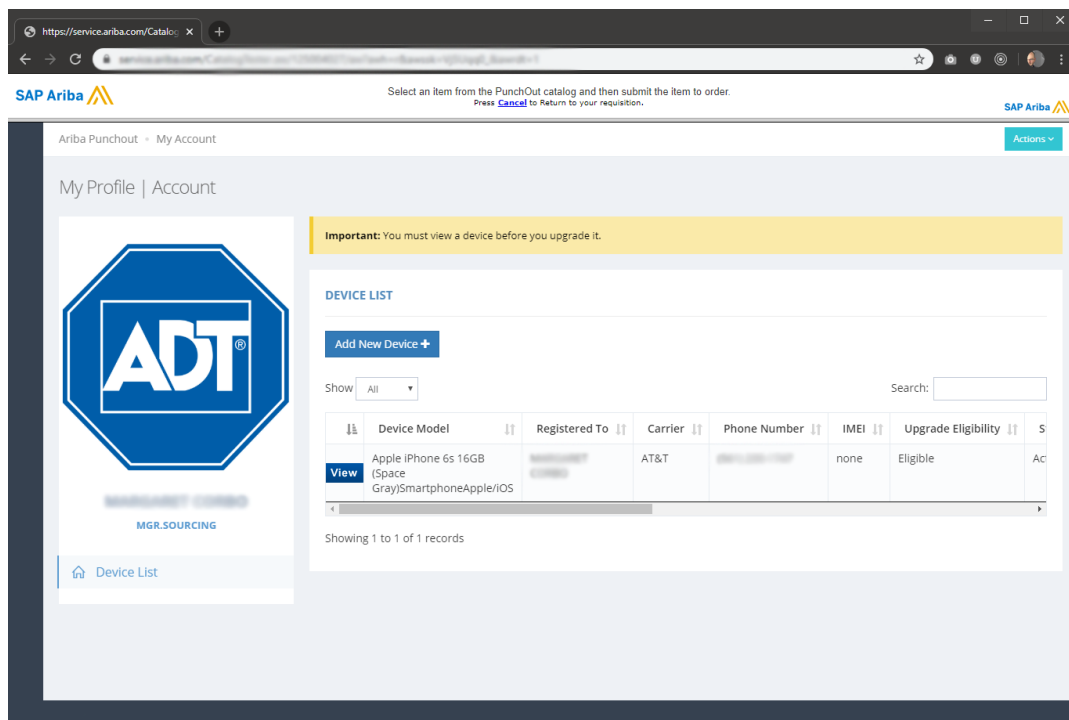
Staff from all over North America can order devices for themselves or for new employees to be hired. Central administration can approve or deny requests to keep a handle on overall hardware and maintenance costs.



10. Functional System Details

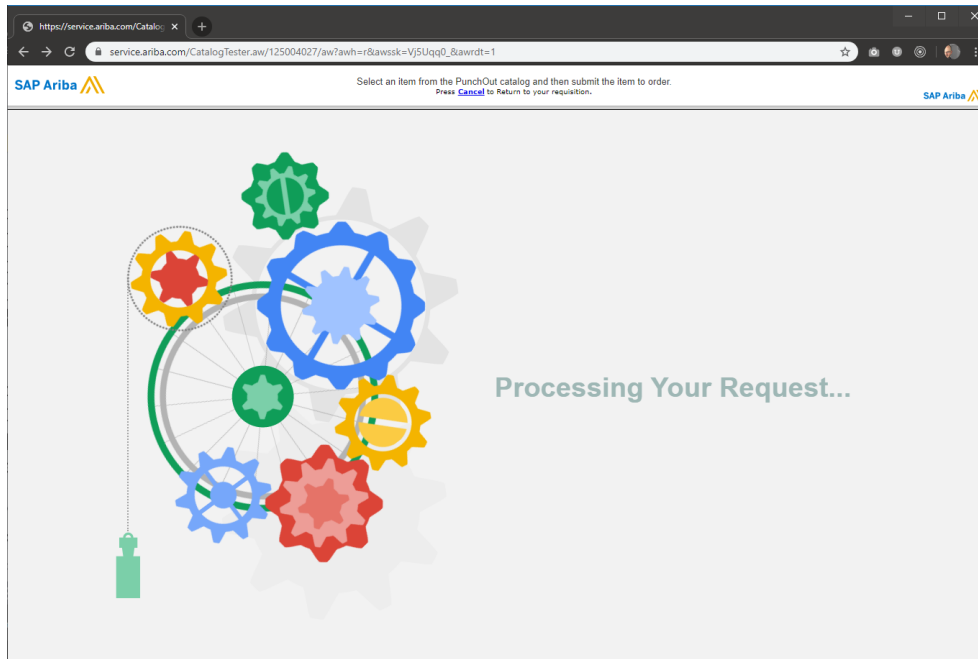
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10.6. System Functionality



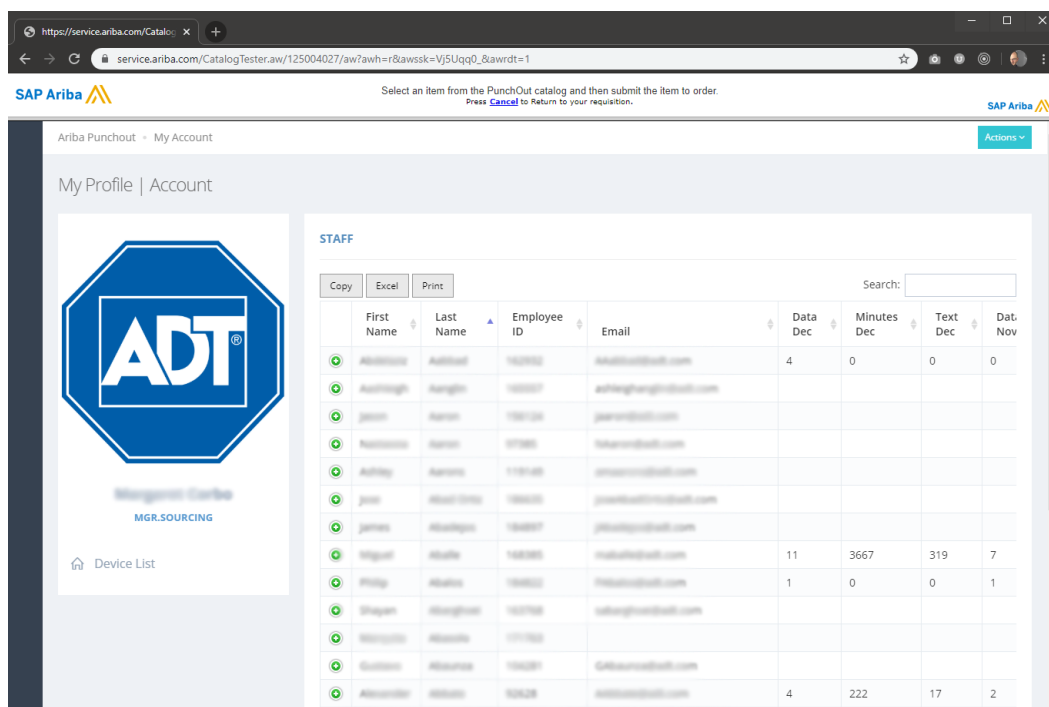
When a user logs into the system SAP Ariba passes their identification data to the catalog punchout application. From there, the system can identify the device(s) associated to that user and apply relevant details and reporting from there.

When a user requires a new device (for an upgrade) or a service (they need a password reset), the system runs through the approval process workflow. For certain requests, a manager will be required to give approval. For others, the system simply processes them.



Managers require the ability to see the details of their staff. This includes all data regarding usage (Data, Minutes and Text) from the previous billing period.

This information can be navigated directly through the app or exported out to Excel to allow a manager to do more in-depth reporting.

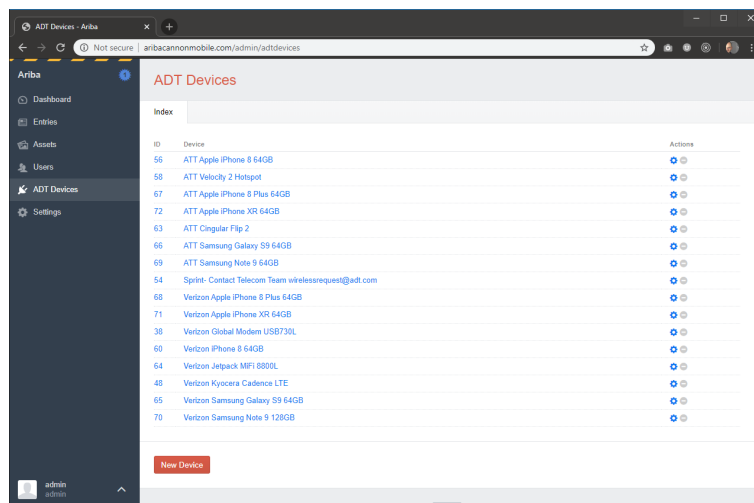
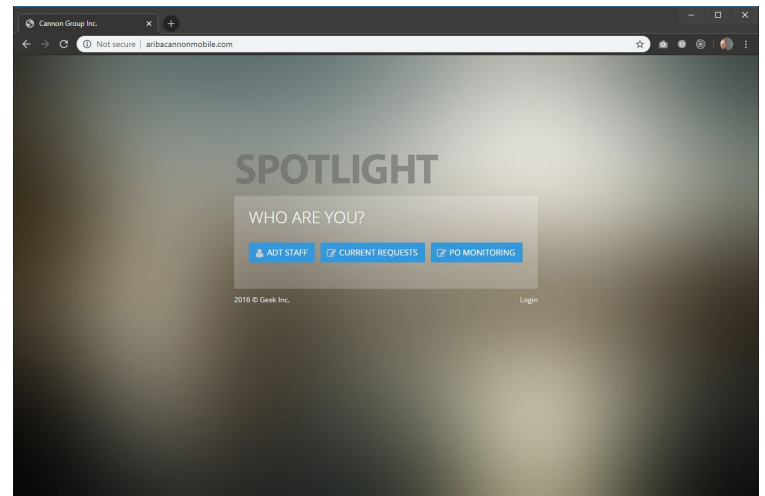


The screenshot shows the SAP Ariba "My Account" page. The left sidebar contains the ADT logo and the text "Manager: Corbin MGR.SOURCING". The main content area is titled "STAFF" and contains a table with columns: First Name, Last Name, Employee ID, Email, Data Dec, Minutes Dec, Text Dec, and Dat. Nov. The table lists 15 staff members with their respective data and usage metrics.

First Name	Last Name	Employee ID	Email	Data Dec	Minutes Dec	Text Dec	Dat. Nov
Abdullah	Abdullah	100002	abdullah@adtd.com	4	0	0	0
Abdullah	Abdullah	100007	abdullah@adtd.com				
Abdullah	Abdullah	100008	abdullah@adtd.com				
Abdullah	Abdullah	100009	abdullah@adtd.com				
Abdullah	Abdullah	100010	abdullah@adtd.com				
Abdullah	Abdullah	100011	abdullah@adtd.com				
Abdullah	Abdullah	100012	abdullah@adtd.com				
Abdullah	Abdullah	100013	abdullah@adtd.com				
Abdullah	Abdullah	100014	abdullah@adtd.com				
Abdullah	Abdullah	100015	abdullah@adtd.com				
Abdullah	Abdullah	100016	abdullah@adtd.com				
Abdullah	Abdullah	100017	abdullah@adtd.com				
Abdullah	Abdullah	100018	abdullah@adtd.com				
Abdullah	Abdullah	100019	abdullah@adtd.com				
Abdullah	Abdullah	100020	abdullah@adtd.com				

For the administration team at Cannon Group, an interface had to be created to allow them to manage the devices and services offered to each of the employees at ADT.

Certain devices are only allowed for employees with a certain level of job title. Additionally, services like international calling are not required for entry level employees.



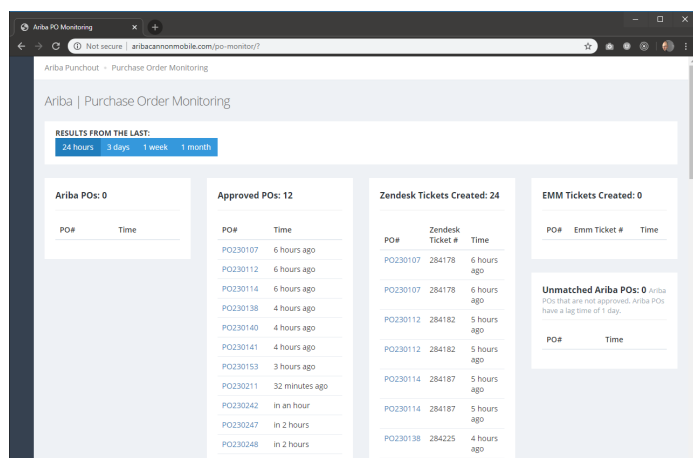
Cannon Group staff have the ability to add these details to the system as a whole – without having to seek approval from ADT management.

Specific types of devices and services have been previously set aside and types of job titles are likewise pre-configured.

As a result, new offerings can be updated with minimum red tape.

Finally, Cannon Group management is able to monitor the details of the system to ensure that support staff are meeting their Service Level Agreements (SLAs).

This information is available online and displayed on a databoard at the head office.



cannon group

Enter name, phone # or ticket #

Advanced Search

ADT

- Order New Line of Service
- Order Accessories
- Company Management ▾
- Back Office ^
 - Company
 - Carriers ▾
 - Customers ▾
 - Reports
 - Activities
 - System ▾
- Admin Settings ▾
- Help & Training ▾

Change Device

TOW-230247

Optimization
For SEVERE/CRITICAL DEVICES - REDDAYS
@TOW-230247
On AT&T TOWER/RS
PERFORM 276-276
@TOW-230247-276-276

Account Manager: Ryan Hernandez
Account Pass Code: 0
Account Pin Code: 0

Details

Submitted By: System System [Non-Admin]
Submitted On: 2014-05-20 4:41pm
Ticket Status: Completed

Device

Device: Apple iPhone 4S Black
Device Identification: IMEI #: 351145000000000 ICCID #: 8901410321000000000

Plans

	Current	New
Primary Plan	Business Pooled Nation: 450 Minutes *\$12.00 Discount*	Business Pooled Nation: 450 Minutes *\$12.00 Discount*
Text Plan	Messaging 200 (\$5.00 Discount)	Messaging 200 (\$5.00 Discount)
Data Plan	Smartphone Unlimited: Enterprise *\$10.00 discount* (\$35.00)	Smartphone Unlimited: Enterprise *\$10.00 discount* (\$35.00)
Add Ons	Unchanged	

Shipping Address:

Miscellaneous

Copy Notifications to E-mail(s): none
Alternate Ops Rep: none [change]
Notes for Cannon Group: Auto Change Device from Carrier Account Variance
Carrier Rep ID: System System

[Leave a message](#)

Once data has been requested and approved from the ADT / SAP Ariba system, it automatically flows into the ticket management system and is assigned to the appropriate support staff member.

Once the details have been taken care of, the information flows back into the reporting system for management at ADT to be able to see.

Details of each employee, their devices and specific ticket requests are logged and audited to ensure the highest level of support is consistently being delivered.

ABOUT GEEK INC.

Geek Inc. is a global information technology services company offering innovative software development, IT outsourcing and IT consulting services.

Incorporated in 2009 and headquartered in Calgary, Canada, Geek is actively helping global corporations to transform and address critical business issues by applying innovative information technology solutions.

With unparalleled experience and comprehensive capabilities across verticals and business functions, we enable businesses to reduce time-to-market and drive growth.

Our Vision

To be a customer-centric organization that simplifies solutions for everyday business challenges.

Our Promise

To provide unsurpassed services to our clients by creating and extending competent, custom-fit and cost-effective solutions.

Why Us

We believe that it takes people with different ideas, strengths, interests, and cultural backgrounds to accelerate innovative thinking.

With years of experience in custom software development, we offer our services to you.

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