

CLIENTEK

CASE STUDIES

2018



Table of Contents

Manufacturing & Distribution	3
<i>Mobile Field Force Application</i>	3
<i>IoT Remote Device & Information Management</i>	4
<i>Device & Equipment Software</i>	5
<i>Supply Chain Estimates & Automation</i>	6
<i>Property Management & Offline Functionality</i>	7
HCM Service Providers	8
<i>Custom User Interface/Portal</i>	8
<i>Compliance Procedures & Management</i>	9
<i>Third Party System Integrations</i>	10
Logistics & Transportation	11
<i>Operations Management – Mobile Application</i>	11
<i>System Integrations & Business Intelligence</i>	12
<i>Data Collection & Processing</i>	13
<i>Direct Distributors & Online Vendors</i>	14
<i>IoT Multi-Vendor Devices & Software</i>	15
Specific Technologies	16
<i>Cloud Based Systems</i>	16
<i>Mobile Application Development</i>	17
<i>Digital Factory – CAD/CAM & Baan IV</i>	18
<i>Custom Engineering Environments</i>	19
Key Differentiators & Contact Information	20

Manufacturing & Distribution

From the factory floor to a customer's hands, technology plays a fundamental role in the product life cycle.

Our solutions are designed to optimize current procedures and offer detailed insights into all stages of the production process.

Keeping up with demand, forecasting production, and managing on-site inventories are all essential functions for maximizing throughput and minimizing inventory expenses.

From Inventory control to operations management, forecasting to shipping; valuable data is constantly being collected. We leverage that data collection to reduce mistakes and increase margins. Our goal is simple; providing true business value.

Mobile applications and factory automations are responsible for massive progressions in the manufacturing industry. However, the innovation doesn't need to stop there; that's what we're here for.

Mobile Field Force Application:

One of Clientek's clients is a major manufacturer headquartered in Minnesota, who serves customers in more than 50 countries around the world.

Their field force service fleet uses a system we built and designed to manage site visits, inventory of supplies, on-site customer receipts, and scheduling activities. Their agents use a custom built mobile application to check-in at each customer location, order supplies, replenish consumables, add/delete services, and sync data instantly. Customers receive detailed reports of each service visit; allowing them to observe service trends and even predict their future needs.

Using their mobile device, agents can easily perform these duties whether they have an internet connection or not. The application automatically syncs with their central service database as soon as a connection is achieved. On-board inventories, product/service descriptions, and customer work orders are always kept up-to-date.

Initially deployed in North America, our team is now hard at work preparing and deploying the system into each of their other service countries. Five down, only 47 to go!

Case Studies

- 2018 -

IoT Remote Devices & Information Management:

One of our clients manages thousands of control devices for washing machines, dishwashers, kitchen appliances, and pool/spa equipment.

Our client wished to analyze the quality of service being provided, with hopes of defining any performance trends. This information would allow them to notify customers of upcoming concerns or issues much quicker, while also increasing proactivity during potential failures.

Another area of opportunity was giving them the ability to program and diagnose the devices remotely. This would not only increase their speed of service, but also reduce the cost of providing it.

Clientek developed an IoT solution allowing them to receive regular updates and specific alerts from all their devices. We developed an interface to remotely manage and program the devices, while also integrating their analytics data warehouse and Salesforce.com for customer alerts and support tickets.

Case Studies

- 2018 -

Device & Equipment Software:

One of Clientek's more noteworthy clients is a major U.S. manufacturer of industrial control mechanisms and services.

We assisted them by modernizing the system responsible for controlling their large-scale laundry machines. Machine cycles, cleaning chemicals, water-sources, and exhaust ports are all being controlled through a single connected control module.

Our Windows based application communicates with the control modules and presents technicians with an easy-to-use and fully comprehensive interface. Operators choose from standard/well-known formulations based on the type of material being cleaned and the kinds of soil found on the items. We also developed additive features allowing them to configure, customize, and store their own formulas within the application.

All remote activities are managed via central servers, meaning operators are kept up-to-date on any new/better formulas, service notes, and any other important information. This central repository also allows them to predict replenishment cycles, repairs needed, and customer demands for various consumables. Operational errors have become nearly non-existent and our client can quickly adapt to the changing needs of their customers.

Case Studies

- 2018 -

Supply Chain Estimates & Automation:

One of Clientek's current clients is a major custom window manufacturer headquartered in Minnesota. We were asked to assist them in optimizing their supply chain planning and estimating process.

Their primary goals were to reduce the amount of time spent calculating their supply chain needs and improving on-time delivery statistics.

The solution Clientek provided helped them automate their calculation of demand while applying configurable business rules to determine significant dates regarding manufacturing, supply orders, and transportation scheduling.

This system also provided the capability to inform customers of the expected delivery date/time for their item(s), minimizing missed deliveries. It also caused a reduction in time spent on these activities by nearly 70%; enabling their resources to spend time on more value driven activities.

Case Studies

- 2018 -

Property Management & Offline Functionality:

For a major U.S. property management client, we built a custom site-auditing system, serving their 1,800 locations across the continental United States. Once a paper-based, cumbersome, and error-prone process, their auditors visited each site on a rotating schedule.

Safety, financial, and other operational audits were performed and manually entered into their central repository. Our custom-built system fully automated configurable audit surveys making all of them available on a portable Windows tablet. Auditors now can start, pause, resume, edit, view, and finalize site audits from anywhere.

Disconnected operation was particularly important in this application since the auditors often carry their tablets into places without an internet connection. The application remains fully functional even without a connection, and when a connection is available, it automatically syncs with the company's central services. For any unreliable internet connections, the system initiates retries until a verified sync has been achieved.

HCM Service Providers

People are the world's most valuable resource. Clientek is here to help you, help them.

Human capital management has become integral to operating a successful organization. We understand the difficulties and complexities of providing these services to customers.

Our history within the HR & Payroll service industry is focused on those providing these vital services. We assist in identifying optimizations, designing interfaces, and developing custom integrations.

Our approach is focused on your success. Whether there are features you are looking to implement or offerings you wish to combine, Clientek has the experience and capabilities to make it happen.

Custom User Interface/Portal:

A prominent project Clientek completed was for a major U.S. payroll-services provider. We built them a custom system that they sell directly to their customers; setting them apart from their competition in many ways; keeping them at the forefront of the innovation curve.

This system provides a mobile interface to a wide array of time-tracking, payroll, and HR central services. Through completely secure and delivery-assured mobile messaging; application users can clock-in, clock-out, view paychecks, request time-off, request shift swaps, and schedule work. Supervisors can use either the mobile app, or a web interface to review, approve, modify, or correct all such transactions and requests.

This system has been in production for two years and our team continues to provide frequent releases of new functionalities, while consistently providing responsive tier-2 support. Several hundred thousand user's login every day, on their Apple, Android, or Windows mobile devices; currently generating more than 10,000,000 sessions per month.

Case Studies

- 2018 -

Compliance Procedures & Management:

Clientek has completed dozens of projects for one of the nation's leading HCM service providers; headquartered in Minneapolis, MN with offices branching throughout Canada, Australia, and other countries around the world.

With a global client base, their customers generate a broad range of third-party informational feeds. We assisted them in modifying their payroll engine, allowing for seamless integrations with their customer's current payroll systems. This not only made their offerings more scalable, but also increased overall efficiency.

One major hurdle when implementing these large customizations is that of legal compliance standards. Throughout the global market, laws and regulations vary greatly from country to country. Our custom-built solution took all these variations into account, assuring the product performed correctly and in adherence to the legal compliances placed upon their customer base.

Case Studies

- 2018 -

Third Party System Integrations:

Effective outsourcing of business and financial processes involves connecting heterogeneous systems and data sources. When this is done by hand, whether it be on paper or by email, error rates sky-rocket and turn-around time for change becomes ponderous.

For a \$2B U.S. provider of BPO software and services, we built a large-scale, configurable, integration engine. The whole system is hosted in the cloud, and our integration engine allowed configurable integration between outside systems; such as ERP, payroll, HR, time-keeping, and inventory. The BPO automation systems are fully maintained by our client.

We provided a custom dashboard that shows the status and progress of transactions to and from the BPO service. Both our client and their customers can monitor the health of their valuable integrations and proactively prevent errors. Changes made in an outside system enter the BPO system quickly and with a full audit trail. The time to integrate a new customer is now three times faster, helping to speed up the entire onboarding process.

Logistics & Transportation

We deliver results.

Whether by land, air, or sea; Clientek is the ideal logistics technology partner.

We understand that in the logistics industry timing is everything. Our project approach and methodology has been designed with that in mind.

Technological advancements have led to a plethora of system providers crowding this industry, many of which require tweaking to meet individual specifications. We partner with our clients to optimize current systems and develop custom additive features focused on providing real value.

Container tracking, EOBR, and intermodal hand-offs are just the tip of the iceberg. Our extensive experience within the logistics industry has made us a reputable partner for countless organizations.

Operations Management – Mobile Application:

Clientek has continued work alongside one of the largest trucking/logistics companies in North America. For them we've developed, designed and built custom software and applications to assist in their day to day operations. We have consistently delivered superior solutions to them ahead of schedule.

The first mobile-device integration we provided has allowed them to do things they never thought possible. We assisted in integrating this new custom software into their existing systems to work harmoniously with the technology they already had in place. Developing a custom mobile application for independent contractors has helped them increase revenues and decrease costs. Utilizing GPS technology and trailer tracking, these systems reinvented the way they conduct business. By receiving much more accurate, easy to use information, they had more choices and opportunities than ever before.

Not only does the new software increase efficiency drastically, it increases the safety of drivers and those around them by monitoring speed, engine data, and duration of time driven. This makes sure that faults and human errors are kept to an absolute minimum.

Case Studies

- 2018 -

System Integrations & Business Intelligence:

Clientek has worked closely with an organization focused on providing data analytics to fleets. This client was focused on allowing their customers to determine more precise obsolescence of their fleet vehicles. This process was often inefficient and failed to recognize potential failures early enough, it needed improvement; that's where Clientek stepped in.

For this client, we built custom integrations to all major fleet telematics providers to collect billions of data points produced by their individual fleet vehicles. This data was then compiled, aggregated and turned into actionable business intelligence to allow their customers to optimize the spending on their fleets.

Due to this new system, customers can easily visualize all the data coming from their fleets and use that data to take action and stay one step ahead of any potential issues. As technology continues to mature, Clientek is here to provide solutions; from developing fully custom systems to large-scale integrations.

Case Studies

- 2018 -

Data Collection & Processing:

Our work has stretched directly into the telematics provider space as well. We've worked closely with one of the largest providers of cost, safety and compliance solutions in the industry.

For them, we developed and optimized a communication gateway that allowed numerous versions of their hardware (installed on over 100,000 trucks) to communicate to a single end-point, processing millions of messages per hour in real-time fashion.

Managing over 100,000 trucks can be very difficult, especially when you want efficiency. Clientek solved this problem by creating a custom solution to bring all communications together on a single, easy to use system. This helped the client manage its fleet and take the proper steps to ensure everything ran smoothly.

Case Studies

- 2018 -

Direct Distributors & Online Vendors:

For a major distributor of electrical/plumbing parts and supplies, we designed and developed a unique and incredibly effective online ordering system.

Their catalog is home to millions of SKUs, making the creation of even a simple order ponderous and error-prone. Thousands of independent/small-business electricians and plumbers order billions of dollars of inventory every year. Their previous systems process was costly and time-consuming; many orders were being abandoned as they were too difficult to complete. This led to many returns and complaints as orders would arrive incomplete or too late for the job at hand.

Hosted entirely on a cloud platform, our online system now makes specific part searches a breeze. Customers can now start their order and return to complete it later. They can also manage several concurrent orders and easily edit, view, and print them. A unique visual representation of the pending order helps shoppers see which components they might have forgotten.

Our client can configure specials and up-sell messages, driving higher individual order totals. In production for two years, Clientek continues to provide regular releases and responsive tier-2 support for this custom software system.

Case Studies

- 2018 -

IoT Multi-Vendor Devices & Software:

Another client of ours needed to understand the status, location, and load condition of their 55,000+ truck trailers and containers; widely dispersed across North America. The trailers and containers were equipped with components from multiple vendors providing the tracking devices and software.

Together, our teams built a centralized information management solution. Each component required a custom integration interface with proprietary protocols and data streams.

When any trailer or container information is received, it's processed through Geofencing to determine the customer location. This multi-vendor solution was designed to integrate effortlessly with our client's trailer/load planning solution. This allows their dispatchers and planners to ensure all trailers are being used efficiently.

Specific Technologies

Complex problems don't always require complex solutions. Simple is good.

Our process drives a well-defined problem statement, forcing decomposition of larger ideas into smaller ideas that can be addressed in a timely manner with high quality. Individual solution elements are completed incrementally, allowing your project to quickly deliver business value early, then build from that start. From internal legacy components through third party, out-of-the-box systems to custom development, opportunities for improvement consistently present themselves.

Cloud-Based Systems:

Moving a system to a cloud-based platform is nearly inevitable. It provides significant benefits to large-scale and distributed enterprises, with real-time elasticity and scalability. Cloud based systems are particularly helpful when custom solutions are fronted by multiple interfaces such as mobile and web-based devices.

Cloud providers offer two main options when it comes to their platforms, hosting and/or PaaS. At its base, a hosting provider sells you the most familiar form of service; a space in which you can create and manage virtual machines with ease via all prominent cloud providers.

However, for a more comprehensive platform many cloud providers also offer the PaaS model. The PaaS model is a platform and component model quite different from that of simply hosting. It is with PaaS that you get real-time elasticity, automatic fail-over with geographically dispersed redundancy, and easy to manage scalability. Most cloud platform services will also layer in well-known management tools by default. Your SQL database will be identically replicated, fault tolerant, and you won't need to configure or manage anything. This platform is robust, secure, and easy to use.

More than 90% of our projects involve PaaS components living in either Microsoft Azure or Amazon AWS, which is now standard practice when improving an aging system or building a new one. Utilization of these systems allows us build consistent, secure, manageable, and scalable custom solutions. As these systems continue to progress we can provide a solution quicker and with more predictability than ever before.

Case Studies

- 2018 -

Mobile Application Development:

Every mobile specialist will claim that the adoption of a mobile workforce will provide rapid innovation within your organization; and they wouldn't be wrong. It is without question that the implementation of mobile devices in the workplace has provided major productivity improvements, and in many cases, even bypassed the expectations those organizations had going into the transition. This is all to be expected as the evolution of these platforms continues to develop and innovate.

This is not some new phenomenon, I'm sure you remember your first web front-end project. Moving the user experience from the desktop to an HTML-driven, truly distributed model was all very foreign. Then productivity improved, and the user's expectations were changed. Just like when the first graphical desktop replaced the basic green screen. This continuous evolution is still taking place and at an even faster rate.

More than 85% of our projects involve both web and mobile front ends, which is now standard practice when improving an aging system or building a new one. We have found that the key component to success isn't just the mobile device itself; it's in building a stable, performant, secure, and manageable technology solution. The hard work comes with building a solution that meets all those standards and that is what Clientek does, time and time again.

Case Studies

- 2018 -

Digital Factory – CAD/CAM & Baan IV:

From Clientek's founding 25 years ago, we've worked with many clients customizing their CAD, CAM, CAE, and PDM systems. Clientek has worked for clients on both sides of Digital Factory.

On the provider side:

- CAD/CAM/CAE/NC integrations with factory floor automation systems
- PDM (Part Data Management) and IC (Inventory Control) Systems
- CAE and 3D-printing systems
- Factory floor automation

On the consumer side:

We have many clients that are large manufacturers and distributors. We currently have IoT development and integration projects going with one of the largest producers of commercial cleaning products, serving 52 countries. Our teams are working on the programming, control, and integration of their widely distributed cleaning machine controllers. Commercial washing machines, for instance, where the controllers govern the chemical mix, grey-water routing, maintenance cycles, and replenishment demands.

For another manufacturer, oriented more toward B2C, we are working with their Baan IV and Baan V systems. We're integrating those systems with a central data warehouse targeting big-data-type analysis of their ordering patterns. Another development is focused on integrating them to a sales-delivery-automation tool to help move orders through from sale, to planning, to manufacturing, to delivery, and even install.

Case Studies

- 2018 -

Custom Engineering Environments:

One of Clientek's most exciting projects was in the bio-engineering space. For this client, we were asked to assist in creation of an elastic computing environment to be used for DNA sequence simulations. Our client had created a computerized mechanism to run DNA simulations by leveraging cloud computing resources and needed assistance in the monetization of this platform. They also needed the ability to scale resource nodes based on the volume and speed desired by their customers.

Leveraging the elasticity of one of the major cloud platform providers, Clientek implemented a scalable framework that allowed the customer to purchase compute time based on their immediate needs. Timing and cost were made readily available to the customer, allowing them to tradeoff between speed and cost to run the required sequences.

Key Differentiators

Deep, Real-World Experience

Clientek completed its first agile project delivery more than fifteen years ago. Realizing that the analysis of objectives and refinement of requirements lead to much better prioritization of agile backlogs, we incorporated *Value-Focused Delivery* early in our maturation process. We've used that end-to-end methodology to both deliver better software systems and to improve delivery to our customers.

Our clients include companies of all shapes and sizes. We've developed and rolled-out thousands of projects world-wide.

Focused on Value Delivery

While paying attention to the details of value-focused analysis and agile methods are important, this is about business results. We discover, document, and measure business objectives and recommend and/or execute changes that target those objectives. Well-defined processes must be adaptable to the needs and culture of the organization. We use measurable objectives to manage such adaptation, producing effective and economical improvements in project delivery.

Full Life-Cycle Attention

Too often, agile processes are adopted only within the confinements of the developer's cubicles. If the development team receives unclear or even absent prioritization, they may be rapidly developing the wrong solution. Successful implementation of *Value-Focused Delivery* should embrace the entire life cycle, from need, through discovery, build, and test to deployment. An organization cannot be agile unless the entire life-cycle becomes agile. We understand and have participated in the complete life cycle with our clients. And we use these techniques exclusively when executing development. We can, and do, cover the full range.

Questions, Contacts, and Further Information

Please feel free to contact us with any inquiries.

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