Executive Summary

At PenguinData, our goal has always been to bring a user-friendly, 21st-century Software-as-a-Service (SaaS) solution tool to companies seeking to automate their daily data flow away from outdated manual processes, thereby greatly enhancing efficiency and productivity and leading ultimately to higher profitability. PenguinData Workforce Management is a tool that manages all of your segmented data as a Tier II Enterprise Resource Planning (ERP) integrated platform, allowing management to see every aspect of their daily data flow in real-time throughout every department and office in the company.

This paper examines many of the features which customers realize a time or cost savings which results in increased efficiency and profitability.

Features and Benefits within PenguinData that facilitate time or cost savings:

- PenguinData is an interconnected tool for your entire Enterprise, which means personnel within your company separated by department or location can utilize the exact same data. This eliminates many "lost in translation" issues.
- Each Module within PenguinData contains its own unique and customizable Alert System which notifies your employees of the specific issues within that module that require attention. The fact that the system "talks" to your staff means day-to-day tasks will not go unaccounted for.
- PenguinData allows each customer to customize their own system, module by module, and location by location, using different Categories, thus allowing each unique database to be set up perfectly for the respective Franchise Agreement. Each PenguinData customer is unique, and by having these customizable Categories, each customer can design the last 10% of the tool to perfectly suit their own needs.
- Data can be uploaded or downloaded to/from PenguinData in various ways. We pre-built many Application Program Interfaces (APIs) to connect PenguinData with other systems you may need, such as Accounting systems, GPS providers, payroll providers, and more, allowing you to push and pull data as required. Imports and exports are also available within PenguinData. We are only limited by the capabilities of the external systems.
- Each Module within PenguinData is integrated into our Corporate Dashboard, which includes a Business Intelligence (BI) Tool that allows our customers the ability to create their own reports, graphs, and charts, the ability to schedule when these reports will be automatically run, and even the ability to have these reports automatically emailed to the appropriate parties. This BI Tool is also available to the local groups. In addition, each module contains its own set of canned reports.
- PenguinData can reference your own User Management System, such as Active Directory, to determine permission levels. These User Permissions can be customized right down to the page. For those without an outside User Management System, PenguinData allows for easy permission management by creating permission groups so that those within the group all have the same permissions.

• PenguinData's Emperor Suite of Modules provides a full-featured workforce management system. It allows you to automate and standardize your valuable business data, close gaps in your operations, and work more efficiently while creating a proactive environment for all your employees and Vendors, delivering a customer-first experience.

Based on our customer experiences, we conservatively estimate the following savings can be expected. In addition, there are many other features/benefits which produce savings that have not yet been examined:

Directors/Managers/Supervisors driving proactive results:

Overall Administrative time savings	12% - 16%
Work Order Automation efficiencies and higher accountability	8% - 12%
Warehouse time savings	10% - 14%
Material leakage/Consumable savings	4% - 9%
Completion % increase	2% - 7%
Construction/Drop Buries are completed in fewer days	15% - 18%

The features and Benefits included herein are some of the key items within PenguinData Workforce Management. In addition to the items listed, additional benefits not listed will yield for more operational improvements and advantages for your enterprise that are difficult to financially quantify. Results vary case by case and depend on many factors, including each company's current processes. Our product, if used 40%, can help drive the business from the top down and the bottom up.

See below for supporting features and benefits for the primary modules.

Workforce Module

The Workforce Module is the central data hub for PenguinData and acts as the connector for all other modules. Workforce seamlessly updates all data in real time, and through our Dashboard Alerts, always keeps track of action items that need to be addressed. Workforce has full API plus import and export capabilities, plus your business becomes fully automated. The G3 Emperor Suite of Modules brings together all of your business's core departments and provides greater communication between the departments. This automation results in new efficiencies, allows you to be proactive and increases accountability throughout your enterprise organization.

- The Workforce Module is the Central Data Hub connecting the other 9 modules.
- Integrates as a turnkey solution. PenguinData has integrated with multiple internal/external data systems to produce the desired data flow architecture that a company needs through numerous application program interfaces (API's). Examples include Billing systems, Ticketing systems, Active Directory and more.
- The alert system in each module has fully customizable functionality that warns the end user of daily issues and tasks that need attention such as expiring insurance, background checks, reviews, certification levels, etc.

- Contractor Vendor Management is easily performed including such tasks as Invoicing, Chargebacks, QA's, and more.
- Automation of time management and start/stop times on the job or projects is achieved and allows users to clock in/out remotely.
- Pay Methodologies are covered from Piece Rate Calculations to Department of Labor Calculations
- Vendor or Employee Tech Data Management creates the most efficient paperless data management system for every person within your company and also for your vendors.
- Our Invoice Management features include Invoice sign-off, instant notification of any coding corrections, and can be performed electronically.
- This module includes our Corporate Dashboard (covered below), which allows users to customize their own reports, graphs, and charts and create schedules to have the reports pulled automatically and emailed to the respective parties. In addition, there are over 100 pre-built reports covering Finance and Operations.

Benefits of Workforce Module:

- Having a Central Data Hub means all departments are interconnected thus eliminating redundant efforts such as emails, phone calls, updating spreadsheets, etc.
- Seamless Integration of the Central Data Hub with other platforms through API connections creates a real-time data flow into all of your company's systems and reduces lag time from legacy processes by several days.
- Alert System assures your required day-to-day tasks get completed rather than overlooked and reduces liability exposure.
- Vendor Management reduces the administrative time involved and streamlines the process with invoicing and back charges, plus saves on document storage costs and related office costs.
- Increased real-time visibility allows you to drive work through completion thus saving days on projects and processes, pinpointing issues, and making corrections timely for many areas:

Material management Vendor billing Document storage Quality Assurance Safety

• Underperforming techs, whether In-House or within your vendors are easily identified thus, additional training can be provided as necessary to increase their efficiency.

- Electronic payroll and vendor invoicing systems drastically reduce paperwork and increases accountability.
- QA of payroll and vendor invoicing can be performed quickly and approved final data can be sent through APIs or exported to your payroll/Accounts Payable provider's software, thus drastically reducing Admin staff hours.
- Work from home environment can easily be created.
- Ability to Push/Pull data to/from other applications such as Oracle, supply chain systems, Active Directory, etc. through direct APIs.

Drop Bury/Project Module

The Drop Bury/Project Module provides the customer's team the ability to monitor and assign underground/aerial projects to vendors and see in real-time the status of all jobs. The module also allows for a seamless process from mobile survey completion to an automated underground locate ticketing process that includes Geo code mapping, including alerts for expiring locates. Using the module's built-in alerts and reporting tools, the customer can easily identify vendors and drop buries/projects behind schedule, complete quality control reports, and allow for electronic filing and storing of data and historical data tracking, including documents and images.

Features within the Drop Bury/Project Module that facilitate these time savings:

- The Drop Bury/Project Calendar allows the user to monitor multiple tasks at a time to ensure all buries/projects are completed on time.
- The Interactive Kanban Board allows Managers and team leaders the ability to track all aspects of buries/projects and tasks to account for every detail electronically.

Visualize workflow on Vendors Limit the number of tasks under "in progress" Pull work from column to column Monitor, Adapt, Improve

- Integrated maps allow for turn-by-turn navigation by the Dispatcher if necessary.
- Alert notifications by Drop Bury/Project task can be customized, giving you crucial information on the status of multiple jobs automatically.
- Drop Bury/Project Billing can be monitored and managed in one location to help ensure Drop Bury/Project billing aligns with Funds made available to that specific Drop Bury/Project.
- Users can monitor crews' time per project to account for productivity.
- Vendor crew's member pay is auto-calculated and flows to the pay sheet within the Workforce Module.
- Crews roll up to Master Vendors for invoicing, ability to debit/credit job codes to vendors
- Automated WIP Reporting.

- Accessibility allows users to get all information from a single location.
- Auto-route and assign underground/aerial drops/projects to vendors and crews with Geo code map integration.
- Map APIs integrated underground locate ticketing process.
- Provides mobile capabilities to streamline the entire bury process from surveys, underground locates, picture uploads creating a virtual wallet, and job completion including vendor billing.
- Site survey tied into each underground/aerial drop/project allowing the user to upload images, maps, and other documents electronically to the virtual wallet.
- When performing locates, the user can automatically transmit files to City and State locating facilities and import the returning locating tickets from the agencies.
- Ability to complete mobile QA's on underground/aerial drops/projects.
- View reports on underground/aerial drops/projects by date range, the crew assigned, or individually by the job.

Benefits of Drop Bury / Project Module:

- The virtual calendars bring true scheduling along with accountability to the teams involved while greatly reducing confusion and streamlining the processes across the board.
- The interactive Kanban board will give the management staff complete visibility and control over all vendors' work being performed and in exactly which stage of the process, thus greatly reducing the amount of time from conception to completion.
- With the alert status, the software constantly brings a to-do list on a daily basis, so date-sensitive tasks are not overlooked, greatly reducing problems.
- Having a virtual wallet assures crews/techs have access to all the correct diagrams, prints, pictures from previous phases of the drop bury/project allowing them to be far more efficient and accountable for the task at hand, thus reducing non-productive hours.
- Vendor management in account reconciliation and overall invoice processing ensures administrative time will be focused where needed, thus will be far more productive.
- System gives users the ability to monitor materials consumed by crew/tech and tied to respective drop buries/projects, thus reducing leakage and waste, resulting in reduced cost of consumables.
- Stronger monitoring capabilities on performance through virtual automation leads to more efficient crews and technicians, thus driving down overall labor costs.

- Automated Work-in-Process (WIP) reporting reduces admin/bookkeeping time and allows for real-time cost monitoring.
- Auto routing of workflow reduces the time spent performing the routing function and makes the crews/techs more efficient, which equates to either less staff required or more work being performed.
- Tracking of locating tickets is streamlined and automated, so locate windows are met.
- Real-time Quality Assurance reporting eliminates wasted paper and greatly reduces labor hours.
- Ability to Push/Pull data to/from other applications such as Oracle, supply chain systems, Active Directory, etc. through direct APIs.

Warehouse Module

The Warehouse Module allows customers to track all Hardware, Materials, and Equipment regardless if it's in your inventory or assigned to a crew/tech, truck, or job/project. This module gives the user the ability to verify all items, whether issued, still in inventory or installed, thus providing a complete and accurate count of each item down to the end user. In this module, you will be able to see who issued the item and when resulting in better accountability. The Warehouse Module is fully integrated, thus creating a seamless data flow throughout the entire system for full tracking and accountability.

- The Warehouse Module integrates fully with the other modules including Workforce and Dispatch, thus allowing inventory from the Warehouse module to be consumed on jobs, inventory swapped, or even reassigned from other modules.
- Alert screen allows the user to set alerts on low inventory levels, unreturned items, open material requests, and tech low parts levels.
- Ability to scan/track items by serial number, stock keeping unit (SKU), and item name, all of which can contain pictures of the items for easy ordering for end users through catalog and mobile device.
- Crews/Techs have the ability to request hardware and materials remotely through our Mobile Catalog, allowing the warehouse to pre-stage the request for the following day, resulting in better efficiency.
- Create material catalogs for different types of work needing different materials.
- Track consumption down to work order/project.
- Users have the ability to transfer equipment from one person to another remotely.
- The reconciliation process for all items is a painless procedure.

- Electronic documentation on all items being checked out and in from the warehouse with employee/vendor acknowledgment with electronic signature capture.
- PenguinData has a safety valve to ensure all items are returned from your staff/vendor before a person/entity can be terminated from the system, resulting in fewer unreturned items.
- This module includes our Corporate Dashboard (covered below), which allows users to customize their own reports, graphs, and charts and create schedules to have the reports pulled automatically and emailed to the respective parties. In addition, there are canned reports covering Hardware, Materials, and Equipment regarding consumption, issuing, on-hand, etc.

Benefits of Warehouse Module:

- Integration with other modules reduces warehouse time associated with assigning hardware, materials, or equipment to specific jobs or projects.
- Accurate tracking of inventory down to the end user increases accountability and reduces the cost associated with lost items.
- Automatic inventory level monitoring eliminates the possibility of running out of stock, thus reducing emergency warehouse runs and reducing Not-Done Jobs due to lack of equipment.
- Automatic electronic ordering by the crew/tech results in reduced paperwork, eliminates wait times at the warehouse, and ensures fully equipped crews/techs.
- Pre-staging greatly reduces the strain on warehouse staff during peak hours and reduces errors, thus allowing you to perform more work with the same amount of staff.
- Reduces paperwork since all documents are stored electronically, allowing you to reduce office/warehouse size.
- Ability to Push/Pull data to/from other applications such as Oracle, supply chain systems, Active Directory, etc. through direct APIs.

Assets/Fleet Module

Your fleet, equipment, fixed assets, and tools are the lifeblood of your company's business. PenguinData's Assets/Fleet Module helps companies keep track of their assets from fixed assets and the vehicles that make up their fleet to meters, tools, and construction equipment. It allows your company the ability to track vehicle maintenance, fixed assets in for repair, transfer a vehicle, sell a vehicle, and record payment data, to list a few. The Assets/Fleet Module is fully integrated into the system connecting with other modules.

Features that facilitate these time savings:

• Issue and assign tools, vehicles, construction equipment, and fixed assets.

- Track fixed assets, construction equipment and vehicles in for repair.
- Automated and customizable Alert System notifies you of expiring tags/tabs and required maintenance.
- Track all certifications and inspections.
- Track all maintenance on construction equipment and vehicles.
- Vehicle status with pictures of both the employee/technician and the vehicle, plus capture signatures on anything issued or assigned with the company agreement next to the signature.
- Vehicle location map.
- Check in/out tools/Create and issue tool kits.
- Track damage tools.
- Track tool purchases and tools transferred.
- Assign fixed assets to vehicles.

Benefits of Assets/Fleet Module:

- Reduce lost assets by capturing signatures with your company's policies which helps support any discrepancies that may arise.
- Tracking tools promotes a structure of accountability, and instills a sense of ownership from your technicians, which will reduce asset spoilage.
- Reduces your company's liability by ensuring all certifications and inspections are current.
- Reduces fleet costs by ensuring your company gets the maximum life span from your equipment and vehicles by tracking and performing scheduled maintenance.
- Creating tool kits saves time in the issuing of assets and promotes standardization within departments.
- PenguinData has a safety valve in place to ensure all assets are returned from your staff before a person can be terminated from the system. This results in fewer unreturned items, saving the company money.
- Ability to Push/Pull data to/from other applications such as Oracle, supply chain systems, Active Directory, etc. through direct APIs.

Dispatch Module

The Dispatch Module allows the customer's dispatchers to see in real-time the location of all jobs and techs (through integrated GPS) on an interactive map. The module also allows for easy communication between the Tech and the Dispatch Department.

Dispatchers can review the job codes entered by the tech, review QA pictures uploaded by the tech, and view which jobs are in jeopardy of missing a timeframe. Dispatchers may also assign equipment to the job or record equipment picked up from the job by the tech. Dispatch pulls data from many modules and also provides data to modules. For example, once a job is closed in Dispatch, it immediately becomes available for QA in the QA Module.

Features that facilitate these time savings:

- Auto-Routing feature routes jobs to Vendors.
- Mobile Work Orders with electronic customer signature.
- Allows Vendors to route jobs to all technicians in the field.
- Map APIs and integrated GPS in the system allow for viewing the locations of Techs and jobs on the same map.
- Integrated maps allow for turn-by-turn navigation by either Tech or Dispatcher. The turn-by-turn navigation also gives Techs/Dispatchers alternate routing options depending on traffic conditions.
- Easily drill down to a particular job or tech.
- Allows for easy re-assigning jobs to other techs to avoid missed timeframes.
- Allows for swapping or re-assigning of CPE, parts, or materials between techs.
- The integrated messaging system allows techs to continue working while awaiting a response from Dispatch, reducing downtime for both Techs and Dispatch.
- Alert system warns dispatchers of jobs in jeopardy for missing timeframes.
- The dispatcher or Supervisor can view pictures uploaded by Techs for a real-time OA process.

Benefits of Dispatch Module:

- Two-way communication with Billing Systems allows users to auto-apply equipment to jobs and hit equipment as needed.
- Drastically reduces missed timeframes and increases completed jobs.
- Drastically reduces lost CPE such as Customer Returns.
- Techs become more efficient since their wait time for dispatchers is greatly reduced.
- Reduce back-end job coding time since job codes are entered in realtime. Allows for the techs to better learn the job codes.

- Allows for a Real-Time QA process which will greatly reduce rollbacks or trouble calls.
- Allows for a centralized dispatch location rather than having multiple dispatch locations. This results in being able to provide better dispatch service with fewer dispatchers and reduced costs such as phone bills, utilities, rent, etc.

Mobile Interface

The Mobile Interface allows all field personnel almost complete access to the system remotely via smartphone, laptop, tablet, or similar device. In doing so, Technicians can record job codes performed on specific jobs, CPE, and material installed on the jobs, record job start and stop times, perform QAs, update escalations, perform inspections, and more. Technicians can also communicate with the dispatch department using our mobile messaging feature, which allows the Technician to be more efficient and reduce "On-Hold" time.

Mobile Interface features that make Supervisors/Technicians more efficient:

Work Orders

Mobile messaging allows for easy communication with dispatch Assign equipment and record customer-returned equipment in the system

Door tag or not done a job with real-time pictures Assign materials to specific jobs Quality Assurance - Self QA Turn-by-turn directions

Quality Assurance Programs
 Upload pictures
 Score jobs
 Select and Route jobs

• Field Escalations allow personnel to record information on tasks while on the job

Upload pictures Notify responsible parties

- Vehicle inspection can be performed real-time while a technician is on the job site, eliminating paper
- Drop Bury

Vendor Job Code
Ability to document and capture while on the job
Picture uploads
Site Surveys
Locates
Turn-by-turn directions

Projects

Can be assigned to individual users Forms completed

As-Builts/prints updated while in the mobile web services Photos captured on individual tasks All data can be tracked on the Virtual Whiteboard by task type Turn-by-turn directions

- Safety Inspections can be performed on-site in the field
- Parts List allows tracking of all parts issued to a technician
- CPE List allows equipment to be tracked once issued

Benefits of Mobile Interface:

- Allows for a completely paperless process, thus reducing costs of supplies and storage and thus creating a more efficient operation.
- Eliminates costly "On-Hold" time by allowing Technician to work while awaiting messaging response.
- Reduces Admin time by having technicians assign job codes to each job.
- Reduction of lost equipment.
- Ability to reduce discrepancies on Door tags and not-done jobs.

Quality Assurance Module

The Quality Assurance Module allows the customer's management and supervisory staff to get instant quality assurance feedback on performance issues and trends and conduct random job sampling to ensure your services meet specific requirements, with the ability to route and see in real-time the location of all available, routed, and completed QA jobs on an interactive map. Pictures can be uploaded and this module allows QA Techs to effectively and efficiently work remotely and paperless.

- Map APIs and integrated GPS in the system for viewing locations of Techs, Jobs on the same map, and auto-routing of workflow.
- Easily drill down to a particular job or tech.
- Full integration with other modules, including Workforce and Dispatch modules, thus as soon as a job is closed, it is immediately available for QA.
- Set a percentage of completed jobs to be reviewed and compared against managed quotas.
- Allows you to select jobs by chosen criteria such as job type, contractor, technician, etc.
- Get instant feedback on the status of any QA job, including access to any uploaded photos.

- View trending performance issues by monitoring pass/fail ratios and technician averages.
- Pictures are easily uploaded to justify QA and are saved and stored electronically, thus drastically reducing paperwork.
- Assign back-charges for jobs that do not pass QA and send the back-charges for automatic invoicing.
- Ability to have the mobile users perform self QA's at the time of installation.

Benefits of Quality Assurance Module:

- Office time is greatly reduced through an electronic selection process of jobs.
- Full mobile access also drastically reduces office time for QA techs since QA is completed in the field rather than at the office.
- Increased efficiency will equate to either a reduced # of QA Techs required or the ability to have more jobs QA'd.
- Electronic data storage eliminates the need to maintain QA records in employee files, eliminates file cabinets, paper, ink, etc.
- Allows for a real-time QA process to greatly reduce rollbacks or trouble calls.

Corporate Dashboard

The Corporate Dashboard brings fully interactive, embedded reporting & analytics, displayed and managed by a Business Intelligence (BI) platform and placed directly within the front-end user interface of the PenguinData application. The PenguinData Corporate Dashboard brings exceptional usability of all your business data in real time.

- Ability to create a Dashboard showing multiple reports, graphs, and charts simultaneously with all updating in real-time.
- Report scheduling allows the ability to create and automatically e-mail to individuals or groups, reports that are needed daily, weekly, monthly, and quarterly, saving precious time that can be used elsewhere.
- · Ad hoc query.
- Ad hoc report designer.
- Analytic views in-memory analysis allows you the flexibility to change views that have been created.
- Dashboards and Reports accessible from all mobile devices.

Benefits of the Corporate Dashboard:

- The Corporate Dashboard is great for:
 - Executives who want an interactive dashboard accessible through mobile devices.
 - Managers who want to drill into detail in an interactive reporting tool.
 - Analysts who need to explore and visualize all aspects of the data being tracked and pushed to other internal systems.
 - Upper management who need to share beautifully branded reports or create graphs and charts.
- · Data-Driven Decision making.
- Eliminates redundant work since the reports can run automatically and even be emailed out automatically thus saves Admin hours every day.
- Increases productivity by having management see real-time data flow and allowing them to be proactive in their decision-making rather than reactive using legacy-type systems.

Escalation/Damages Module

The Escalation/Damages Module allows the customer's management and supervisor staff to see and track in real-time the progress of all escalations and damages in one location while assigning a tracking level and urgency level to each to ensure swift resolution. The module provides automatic notifications to responsible parties, integrates with other modules, and ensures no tickets fall through the cracks.

- Ability to create tickets instantly by our simple search that will pre-populate data based on when the work order occurred.
- Email notifications sent to tech supervisors or management upon ticket creation, update, or closure based on priority level.
- Allows for calls and notes to be tracked.
- Allows for appointments to be scheduled and email notifications automated to a supervisor who has been assigned to the incident.
- Allows a mobile user to upload relevant data to the system, including pictures for documentation purposes.
- Alerts for customers that have yet to be contacted, pending appointments, and outstanding tickets.
- Allows for input of costing into each ticket and enables the ability to assign back-charges for damages caused by vendors and send the back-charges for automatic invoicing.

Benefits of Escalation/Damages Module:

- Improve customer service by improving your average closing time by monitoring the system's alerts and built-in reporting features.
- Identify trends by tech or vendor to reduce expense and customer disapproval rate.
- Full mobile access and real-time updates make your Field Staff more efficient, greatly reduces paperwork, reduces drive-time, and reduces the number of staff needed to handle the tickets.
- Quicker resolutions equate to lower damages and a reduced overall cost.
- Ability to Push/Pull data to/from other applications such as Oracle, supply chain systems, Active Directory, etc. through direct APIs.

Vendor/Employee Management Portal

The Vendor/Employee Management Portal allows all employees and vendors to see detailed information about what has been assigned to them and what they are being held accountable for. This portal allows a company to be transparent to its employees and vendors by showing them the information they are looking at. Technicians can also receive broadcast messages within the portal and sign off that they have read and understand the message.

- Full Vendor/Employee summary.
- Vendor/Employee Tech Schedule.
- Vendor/Employee can sign off on the time sheet electronically.
- Vendors/Employees have the ability to sign off on pay sheets/Invoices to ensure accuracy.
- Vendors/Employees have the ability to manage their billing on a daily and weekly basis, saving time with weekly verification and changes.
- Vendors/Employees can see what items by serial number have been assigned to them.
- Status Change Forms.
- Vendor/Employee scorecard allows the person to see their performance daily, giving them the ability to make the necessary changes to improve their scorecard.
- Electronic signatures and receipts for all equipment issued and returned, guaranteeing accuracy.
- Email notifications.

• Vendor/Employee Billing Reports.

Benefits of Vendor/Employee Management Portal:

- Electronic functions reduce paperwork and related costs.
- Automated system for sign-offs for time sheets/pay sheets reduces non-productive hours, thus increasing Technician efficiency.
- Reduces Company exposure since records are maintained with vendor/employee acknowledgments and sign-offs.
- Reduces admin time since Technicians can review their own codes, etc., and do not need assistance from office staff.

