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Original Article

AI-Enhanced Workforce Optimization using UKG Pro WFM and Groovy Scripting

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Abstract - To keep your employees happy, boost performance, & cut down on waste in today's fast-paced business world, you need to get the most out of them. UKG Pro Workforce Management (WFM) is a set of tools that help you plan your work, keep track of your time, & figure out how many people you need to hire. This is an excellent way to write your own explanations that respect the company's policies & laws. Artificial Intelligence improves UKG Pro Workforce Management by letting you utilize predictive analytics to find problems as they happen & address them by changing how you do things. Artificial Intelligence takes care of mundane office tasks & turns raw data about employees into relevant information for Human resources managers. This is good for business. The article describes the story of how a company used UKG Pro, Groovy scripting, & Artificial Intelligence to address scheduling problems & make sure there were always enough workers for the number of customers. The company was able to prove that they were effectively managing its staff & getting them more involved by using dynamic forecasting, proactive absence management, & strategic scheduling. After the case study, a lot of things changed. For instance, the projections are 30% more accurate, & the schedule is 25% less likely to cause problems. These examples indicate that Artificial Intelligence solutions for managing people could change a lot of the way things are done. This webinar is for operations managers, system integrators, & human resources directors who want to learn how to get the most out of UKG Pro & Artificial Intelligence-powered bespoke scripts. The stats demonstrate that it will help them attain their unclear goal of making their employees better.

Keywords - Workforce Management, UKG Pro WFM, Groovy Scripting, AI in HR, Scheduling Optimization, Timekeeping Automation, Predictive Analytics, HR Technology, Labor Cost Control, Smart Scheduling, Attendance Management, HR Workflow Automation.

1. Introduction

Digital technologies, changing employee expectations, and a greater focus on being able to quickly respond to unexpected events are all making workplaces change quickly these days. As the world around them changes all the time, businesses need to develop smarter, more scalable, and more adaptable ways to manage their employees. HR departments used to be mostly responsible for handling paperwork. Now, they are strategic partners that make sure the firm meets its goals by aligning the workforce with those goals, getting employees more involved, and making sure that everyone respects the rules in a varied and sometimes decentralized workforce. Now that this has happened, it's even more important to plan the workforce better, make better schedules, and discuss more openly about how work is done. It's hard to get workers in this location. Human Resources teams have to deal with a multitude of problems, such as differing labor laws, union contracts, employee preferences, the changing needs of the firm, and tight budgets. Sometimes, regular ways of scheduling can't handle this change. This can impair staff morale, make things less efficient, and make them less obedient. It is also harder for firms to adapt rapidly when they have to stick to a timetable and keep track of time. This is especially true in places where a lot of people come and go or where the weather affects demand. These issues make it clear that there is a great demand for a smart, well-thought-out strategy to manage a team.

UKG Pro Workforce Management (WFM) is a high-tech system that tries to fix these issues. UKG Pro WFM is a business tool that offers everything a firm needs to keep track of time, make schedules, deal with absences, and plan for future staffing needs. People who wish to keep track of all their work tasks in one place often use it because it is simple to use and has a lot of capabilities. Even though it has a lot of capabilities, corporate customers sometimes have to deal with rules, custom procedures, or needs that are unique to their industry that the platform isn't set up to handle. This is why you should use Groovy. Developers and system administrators can add their own business logic to processes in UKG Pro WFM using Groovy scripting. You can use Groovy to adjust the rules for getting overtime, figuring out how much you owe, and making approval processes more onerous to meet the demands of your organization. This scripting layer connects everyday tasks to problems that businesses have to deal with in the actual world. It makes ensuring that running a business is lawful and in line with the company's goals. Every day, technology becomes better. Businesses are starting to obtain more useful information and better forecasts from the data they collect from their employees as AI gets smarter. UKG Pro WFM's AI-powered analytics make regular reporting better by giving you real-time dashboards, predictive simulations, and the capacity to discover problems. HR managers may now utilize data to make decisions instead of just fixing problems. For example, they can plan for times when

they won't have enough staff, look for patterns in absences, or make the most of shift assignments based on how productive people are. AI helps you make your workforce strategy stronger and more flexible by making decisions faster and more accurately.

Figure 1. AI-Enhanced Workforce Optimization

This essay talks about how AI, Groovy scripting, and UKG Pro WFM can all work together to revolutionize the way we get the most out of our workforce. We talk about the problems that lead to new ideas in HR technology, highlight how custom scripting can help with real-world problems, and show how AI changes what can be done with scheduling, compliance, and operational efficiency. From this point of view, managing people is more than just being nice; it's a technique to move ahead.

2. Overview of UKG Pro Workforce Management (WFM)

UKG Pro labor Management (WFM), which used to be named Kronos, is a big, versatile platform that can meet all of the needs of today's labor operations. It features business tools and gives you a single framework for carefully managing procedures that need a lot of work, making sure that everything is done correctly and on time. UKG Pro WFM gives HR and operations managers the tools they need to handle difficult accrual procedures, union rules, shift changes, and compliance standards from other countries. This keeps the workers focused on what the company wants to do. UKG Pro WFM has four primary parts: timekeeping, scheduling, absence management, and accruals. Each one focuses on a different crucial component of making the workforce more productive.

2.1. Core Modules of UKG Pro WFM

- Timekeeping: UKG Pro WFM's timekeeping tools do more than merely keep track of when people come and go. It shows the whole picture of how many hours were worked compared to how many were planned. This helps make sure that workers obey the regulations and get paid what they should. Because it works with biometric devices, mobile time input, badge-based tracking, and geofencing, it may be used in a number of different situations. It helps stop time fraud, keep payroll leaks to a minimum, and make sure that all departments treat their employees equally.
- Scheduling: The Scheduling module lets you make, manage, and change shift patterns in a smart way that meets the needs of the organization, the preferences of the employees, and the law. Managers may improve how they allocate workers by using features like shift bidding, rule-based auto-scheduling, and real-time visibility into workforce coverage. Advanced services include alerts for too few or too many staff members, which gives businesses the ability to make changes before they happen.
- Absence Management: Absenteeism has a direct effect on how well things run, how much work gets done, and how happy the team is. UKG Pro WFM makes it easy to set up automated requests for time off, approvals, and tracking for numerous types of absence, like vacation, sick leave, FMLA, and personal days. More rules regarding who can use it, how much it costs, and when it sends out notifications. These rules change from policy to policy. This makes it clear and fair how to handle absences.
- Accruals: Administrators may have a lot of work to do when it comes to managing things like paid time off (PTO), sick leave, or compensatory time. This is especially true when employees come from different backgrounds and have different ideas about who is entitled to what. UKG Pro WFM users can create and enforce complicated accrual rules based on things like how long someone has worked, what kind of employment they have, how many hours they work, and other unique triggers. It makes sure everything is right and reduces fights, which makes workers feel better and the administration work better.

2.2. Integration Capabilities and Enterprise Use Cases

UKG Pro WFM is helpful since it can simply connect to a lot of various company systems, such as HRIS platforms, payroll providers, ERP systems, and analytics dashboards. UKG Pro WFM may move data across systems in real time using APIs, flat-file exchanges, and middleware platforms like Dell Boomi or MuleSoft. Companies need to be able to work together, especially if their teams are in different countries, their offices are in other countries, or they do some work from home and some in person. Some examples of how to use this are in healthcare (for shift differentials and credential monitoring), manufacturing (for union compliance and fatigue management), retail (for peak labor estimates), and logistics (for job-based costing and mobile time tracking). In these cases, the platform helps administrators accomplish their tasks and makes it easier to shift resources around.

2.3. Limitations in Default Configurations

UKG Pro WFM has a lot of features, however its default settings don't always work for every firm. Default rule sets and processes are meant to handle a wide range of compliance and workforce scenarios, but many firms have trouble using them for unusual rules or agreements. Companies may need to do different computations for shift premiums in each department, use multiple methods for attendance points, or have stacking overtime limits that are hard to understand. You usually can't meet these needs on your own with the user interface. When there are exceptions to the rules, it's hard to obey the rules in your area, or business logic changes quickly, you need to update more than just the fundamental parameters.

People may try to get past these kinds of rules, accomplish things by hand, or report things wrong when there are these kinds of limits. All of these characteristics can make it harder to follow the rules and keep operations running smoothly. Groovy scripting is very important since it lets developers write code that matches the rules for how the business works and how employees should behave. When you add Groovy code to the system, UKG Pro WFM goes from being a flexible platform to a fully configurable solution that works for a wide range of organizations.

3. Role of Groovy Scripting in UKG Pro Workforce Management (WFM)

Using Groovy programming is important to make the UKG Pro Workforce Management (WFM) platform more useful & also flexible. Companies that utilize UKG to improve employee performance frequently run into many problems when the default settings don't work with certain company rules, laws, or operational standards. This needs Groovy, which is a powerful dynamic scripting language for Java. UKG WFM is a very flexible business solution since you can change it using Groovy programming. It lets developers add their own code right into UKG's workflow engine.

3.1. What is Groovy and how is it used in UKG?

Groovy is an object-oriented programming language that works well with Java & all of its parts. It's a great choice for scripting functions in these business apps since it has straightforward syntax, dynamic typing & is easy to use. The UKG WFM framework uses Groovy to change business rules, automate tasks, check user inputs & do calculations in actual time that other setups may not be able to handle. It's easy to combine Groovy scripting with UKG's configuration architecture, especially for basic tasks like monitoring time, making schedules & adding up hours. You can't use this scripting tool to create complete programs. It is meant to make little changes, such as adding logic at different points in the data lifecycle to meet the needs of a big business.

3.2. Groovy Scripts' Most Common Uses

People typically utilize Groovy scripts in UKG WFM for the following things:

- Custom Validations: Businesses typically need more than the basic rules of their sector. Groovy scripts may check data inputs against a set of rules that might change. For instance, they don't require permission from management to stop time entries during vacations & they can see clock-ins that happen outside of the geofenced locations.
- Field Calculations: UKG's normal time calculation or accrual approach wasn't enough to meet the various rules that companies had to follow. Depending on how long someone has been there, Groovy scripts can figure out how much vacation time they have left, provide part-time staff hours, or add extra hours in line with union agreements.

Scripts may provide alarms, assign tasks, or begin the approval process in automated workflows. A script may automatically tell a boss when an employee is late for a specified amount of time.

3.3. Examples of Automation Driven by Groovy

- Auto-Accruals: If an employee works at least 100 hours in a month, the employer may provide them paid time off (PTO) that month. A Groovy script may look at this & decide whether to add or remove accruals.
- Conditional Alerts: If safety is the most important thing, workers may not be able to perform two shifts in a row without an 8-hour rest in between. If specific criteria are reached, Groovy may keep an eye on shift patterns & send out warnings or stop scheduling right once.

- Rules for enforcing shifts: Some companies may only have rules that apply to select parts of the business. For instance, they could have to pay twice as much for emergency calls on holidays. These hierarchical rules may be utilized in Groovy without breaking the platform.

3.4. Benefits of Customizing Groovy

- Accuracy and adaptability: Groovy scripting makes it possible to run business rules exactly as they should be, even when they can't be set up using normal user interface options.
- Operational Efficiency: Automating checks and processes cuts down on the need for human oversight & gets rid of unnecessary tasks.
- Compliance Assurance: Companies may include employment laws & union contracts that are particular to their area straight into the system's logic.
- Scalability: Custom scripts grow with the business, so they can handle the latest rules or changes to the structure without needing a lot of reconfiguring.

3.5. Risks and Things to Think About

Groovy has a lot of useful features, but if you don't use it properly, it may also be dangerous:

- Taking care of Troubleshooting may be harder if scripts are poorly documented or too complicated, especially following staff changes.
- Incompatibility with updates: Major system upgrades or API changes in UKG might break existing scripts that depend on out dated functions or structures.
- Inefficient scripting logic may slow things down, especially when working with large datasets or doing calculations in real time.
- Testing and Security: Scripts must be thoroughly tested & validated to avoid making logical errors, corrupting information, or breaking policies by accident.

In short, UKG WFM's Groovy scripting lets you change a lot of things that are unique to your business. When utilized correctly & wisely, it helps businesses automate, optimize, and enforce complicated employment needs. This changes UKG from a good platform to a specialized labor engine.

4. AI Techniques for Workforce Optimization

AI can help people run their businesses in new and imaginative ways. It does this by teaching typical HR workers how to make quick judgments, learn as they go, and make good guesses about what will happen next. AI can help businesses with simple tasks like keeping track of time, ensuring everyone follows the rules, and keeping track of who is missing. One of these answers is UKG Pro Workforce Management (WFM). It does this by giving managers information that helps them guess what will happen with their team, cut down on waste, and get people more excited about their work. This part talks on AI tools that can benefit workers, such as machine learning, natural language processing, predictive analytics, and making sure that rules are followed. It also speaks about the tools and libraries that a lot of people use to perform these things.

4.1. Predictive Analytics for Absenteeism and Turnover

Predictive analytics looks at data from past employees to create informed assumptions about what will happen in the future, such as how productivity, absenteeism, and attrition will change. AI algorithms can find patterns in data on demographics, attendance, time off, and engagement that are hard to see. A predictive model can tell you that an employee is likely to leave if they are having more trouble showing up to work and are less interested in their work. Most of the time, these models use logistic regression, decision trees, or gradient boosting algorithms that have been trained on labeled datasets that show how many people have departed in the past. AI tabulates Centers for Disease Control and PreventionThumbs up and down, the number report-prints of Days Off, the weather, and the number of people who have taken sick leave in the past to determine how many people will be absent. Companies can use this information to prepare for more employees, initiate health and wellness programs, or fix problems with people not turning up before they grow worse.

Benefits include:

- Reduced unplanned absences through proactive scheduling
- Lower attrition rates by targeting engagement efforts
- Improved staffing forecasts during seasonal fluctuations

4.2. Machine Learning Models for Schedule Optimization

Most of the time, huge companies have regulations about how they set things up that can't be adjusted based on when individuals are free, what they want, or when they need to take time off. This might make things take longer. Machine learning (ML) improves scheduling by treating it like an optimization problem that identifies the best number of workers to finish the project while also making sure that everyone respects the rules, is fair, and is happy at work.

ML models like reinforcement learning, constraint-based optimization, and genetic algorithms are commonly used to:

- Automatically generate shift patterns based on historical demand
- Minimize overtime and underutilization
- Honor employee shift preferences and availability
- Predict peak times and allocate skilled labor accordingly

These systems always listen to feedback, including attendance and performance throughout shifts, and use it to make their ideas better. Using optimization heuristics along with supervised learning makes ensuring that operations are fair, efficient, and follow the rules. For instance, a predictive scheduler might suggest rotating night shifts among employees to avoid fatigue or recommend shift swaps based on predicted drop in productivity.

4.3. Natural Language Processing (NLP) in Workforce Sentiment Analysis

Natural Language Processing (NLP) can help businesses figure out how people are feeling right now by looking at performance reviews, employee surveys, chat logs, and feedback forms. NLP algorithms look at and analyze unstructured data to find trends in employee morale, figure out why people are unhappy, and find toxic workplaces before they get worse.

Key NLP applications in workforce management include:

- Sentiment analysis: Determines whether feedback is positive, negative, or neutral
- Topic modeling: Extracts recurring themes from open-text responses
- Emotion detection: Identifies deeper emotional tones like frustration, joy, or anxiety
- Intent recognition: Understands actionable feedback embedded in messages

By integrating NLP dashboards with UKG Pro WFM or broader HR analytics suites, leaders can take data-backed actions such as redesigning workloads, launching wellness programs, or escalating HR interventions where necessary. For example, a spike in negative sentiment from a specific department may correlate with an overly demanding schedule, prompting a deeper review of workload and staffing policies.

4.4. AI-Driven Compliance Monitoring

Following the rules is part of being a competent manager. This is really significant for businesses that work in a lot of different places where the laws, union contracts, and timekeeping procedures are all different. AI makes sure that rules are always followed by automatically enforcing them, detecting things that weren't supposed to happen, and keeping a watch on the rules to make sure they are being obeyed.

AI systems can be trained to:

- Monitor time and attendance data for violations (e.g., unauthorized overtime, missed breaks)
- Ensure scheduling rules are met (e.g., mandated rest periods between shifts)
- Flag discrepancies in pay calculations or accruals
- Track adherence to labor contracts or federal/state regulations

Isolation forests and autoencoders are two examples of anomaly detection algorithms that can let HR or payroll know when something is incorrect, like when someone continually lying about their hours or abusing overtime. This makes it easier to undertake audits ahead of time and makes sure that everyone is following the regulations without having to check things after payroll. Moreover, AI-driven compliance monitoring reduces administrative burden by automating documentation, audit trails, and escalation workflows.

4.5. Tools and Libraries Commonly Integrated

When data scientists and teams work on workforce analytics, they usually employ a mix of open-source libraries and corporate platforms to finish their AI initiatives. These tools will help you build, train, use, and improve your prediction models. You can also utilize APIs or middleware to link them to systems like UKG Pro WFM.

Commonly used tools include:

- Python: The go-to programming language for AI/ML in HR tech. Used for data preprocessing, model training, and analytics scripting.
- Scikit-learn: Offers efficient implementations of regression, classification, clustering, and anomaly detection algorithms. Ideal for quick prototyping and deployment.
- TensorFlow &Keras: Popular for deep learning tasks, including time-series prediction and complex NLP use cases.
- XGBoost&LightGBM: High-performance libraries for gradient boosting, often used in predictive analytics for turnover and absenteeism.

- NLTK and spaCy: NLP libraries used for tokenization, sentiment analysis, and named entity recognition in employee feedback analysis.
- Azure Machine Learning / AWS SageMaker / Google Vertex AI: Cloud-based platforms that support model training, autoML, MLOps, and integration with enterprise apps like UKG.
- Power BI & Tableau: For visualizing AI insights in real-time dashboards, often embedded within HR portals or executive reports.

4.6. Integrating AI Models with UKG via Groovy Scripts

Using Groovy scripting to add AI features to UKG Pro Workforce Management (WFM) is a great method to integrate intelligence and automation. UKG Pro WFM is an excellent tool for making plans and sticking to them. When you add AI-driven insights to processes, the system may be able to make better decisions that take the situation into account and even forecast what will happen next. Groovy links UKG's fundamental characteristics to AI products made by other firms.

4.6.1. Architecture Overview: Connecting AI APIs with Groovy Logic

At a high level, the architecture for integrating AI models with UKG via Groovy consists of the following components:

- AI Model Host (Cloud/On-prem): AI models are run on a server, a cloud platform (such AWS SageMaker, Azure ML, or Google Cloud AI), or through a service that the company manages. You can train these models to do things like forecast absences, find the best shift allocation, or evaluate the danger of weariness.
- RESTful API Endpoint: You can get to the AI model through a REST API that uses API keys, OAuth2, or JWT tokens to make sure that only you can use it. This API takes in data such as an employee's ID, shift history, and scheduling context and returns data such as the likelihood that someone will be absent and the times they like to work.
- UKG Groovy Script Layer: UKG Pro WFM uses Groovy scripts to get information from other programs' APIs, look at the replies, and make judgments based on them, such who can work certain shifts or move people around before they need to.
- Integration Middleware (Optional): Using a middleware layer like Dell Boomi, MuleSoft, or a custom Node.js/Java proxy to handle authentication, retries, logging, and rate restrictions can make things safer and easier to monitor.

This architecture enables seamless AI-powered decision-making in real-time or batch modes, fully integrated into the UKG user experience.

4.6.2. Use of Web Services and Secure Endpoints

Groovy scripts in UKG Pro can initiate outbound HTTPS requests using built-in libraries or through connector functions configured by system administrators. These scripts must be tightly controlled to ensure security, reliability, and performance.

Best practices for secure API consumption include:

- Token Management: Use time-limited access tokens or API keys stored in secure configuration repositories, not hardcoded in the script.
- HTTPS Enforcement: Always use TLS-secured endpoints for API communications to protect sensitive workforce data in transit.
- Firewall Whitelisting: Restrict inbound access to the AI model endpoint based on UKG's static IP ranges or through a secured VPN tunnel.
- Rate Limiting & Throttling: Ensure that the AI API supports graceful degradation and prevents abuse under high volume scenarios.
- Payload Validation: Validate inputs on both ends to prevent injection, format errors, or data corruption.

Groovy scripts can leverage HttpURLConnection or higher-level REST clients (if permitted) to construct API requests, parse JSON/XML responses, and feed results into UKG's scheduling or accrual logic.

4.6.3. Real-Time vs Batch Execution Models

Integration models typically fall into two categories depending on use case, latency tolerance, and system load:

- Real-Time Execution: This method uses Groovy scripts to perform API calls, even while the process is still going on. For instance, when someone asks for a timetable or when shifts are given out. AI's detection of signs of exhaustion or new absence risk ratings is an example of how decisions are made based on the most recent information.
  Pros:
  - Up-to-date predictions
  - Responsive decision-making
  - Context-aware execution

  Cons:
  - Adds latency to workflows

- Depends on API uptime
- Requires strict rate limiting and timeout handling

Use Cases:

- Dynamic shift assignment
- Fatigue risk scoring
- Attendance policy enforcement

- Batch Execution: AI predictions are made on a set schedule, like nightly jobs, and stored in a data repository, which may be UKG, a cloud database, or an SFTP folder. After that, Groovy programs can get this data from their own computers or by using a simple retrieve, which means they don't have to perform API queries that happen in real time.

Pros:

- Faster execution
- Less dependency on external services
- Easier debugging and rollback

Cons:

- May use stale data
- Limited adaptability to sudden changes

Use Cases:

- Monthly attrition risk forecasting
- Weekly absenteeism trends
- Shift forecasting based on historical patterns

Hybrid models are also possible where critical decisions use real-time calls and routine operations rely on batch scores.

5. Benefits and Considerations

5.1. Quantitative Benefits

Using smart employment planning and scheduling tools, especially those powered by AI and analytics, gives you big quantitative benefits across key operational KPIs.

- Time Efficiency: Managers may spend a lot more time on many other activities when they use automated scheduling. AI-driven optimizers or rule-based systems can make the best schedules in only a few seconds. This helps managers stay focused on the most important things. Researchers say that utilizing AI to plan might cut down on planning time by as much as 80%.
- Less Absenteeism: Predictive analytics helps people respond quickly by finding patterns in absenteeism and pointing out people or situations that are more likely to be a high risk. If you plan shifts & workloads ahead of time based on what employees want, there will be fewer cases of absenteeism, tardiness & missed shifts without any other notice.
- Better Compliance: Smart systems automatically follow union & government rules, such as the maximum number of hours worked, required breaks & rest periods. This means that workers are less likely to break the law. Audit trails & compliance dashboards make it easier to follow the rules & let people know how compliant they are.

5.2. Benefits in terms of quality

Intelligent systems not only provide you numbers, but they also make qualitative improvements that make the whole work experience & company culture better.

- Employee Satisfaction: The best changes are those that take into consideration each person's skills, schedule & also preferences. This gives workers additional options and makes it easier for them to balance their work & also personal life. Self-service options like changing hours, changing shifts using mobile devices, and actual time messaging all make operations run more smoothly and provide workers more freedom.
- Fair Scheduling: AI scheduling algorithms make sure that everyone is treated the same way, which makes the process fair. Employees are more likely to trust their coworkers & be happy with their jobs when they know that everyone will be treated fairly. This is especially true in places where people leave regularly or work shifts.
- Clarity in Management: Managers may be able to make better decisions & avoid scheduling problems if they know more about attendance, work habits, and productivity measures.

5.3. Things to think about before putting it into action

Even if it has many other advantages, setting up an intelligent scheduling system requires a lot of important thought:

- Data Privacy: These systems usually demand a lot of personal information about workers, such as when they are available, where they are, their leave records & how productive they are. You must follow data protection laws including GDPR, HIPAA, and CCPA. Data must be kept safe &, if possible, not linked to a person. Only anyone with permission should be able to get in.
- Bias in the Model: AI-based scheduling systems need to be able to handle many other different types of information. They may make existing biases worse, including punishing workers who have already taken maternity leave or been

sick. One way to lower these risks is to do regular audits, make algorithms easier to understand & limit how fair algorithms can be.

Governance systems must clearly define who owns and manages what, evaluate model options, and have backup plans in case anything goes wrong. This means that people from HR, IT, operations & the legal department need to work together to keep an eye on things.

5.4. Ways to Manage Change

Strategic change management is particularly crucial for a successful deployment since it gets users on board and makes sure the value lasts for a long period.

- Getting Stakeholders to Help: Involve workers and supervisors on the front lines from the start of the planning process. Hold workshops to find out what people need, what challenges they have, and how to make critical scheduling guidelines that everyone can agree on.
- Support and training: When users first start using the system, give them a lot of support. This should include both technical training and instruction on how to read system suggestions and deal with exceptions.
- Initiative Programs: Start applying the solution in tiny increments, as in one department or area. Use input from pilots to make system settings better, address issues, and show off the first successes.
- Feedback Loops: Set up ways to get employee input after implementation, including anonymous questionnaires or digital feedback forms. Use these findings to slowly make things easier to use and more fair.
- Talk to each other clearly: Make it clear how the system operates, what data it utilizes, and how it makes judgments. Transparency makes people less afraid of being observed and more likely to trust AI suggestions.

6. Case Study: A Mid-Sized Retail Chain using UKG Pro WFM + AI

6.1. Background of the Organization

There are more than 60 BrightMart stores in five different states. There are more than 4,200 people working in frontline jobs, such as salespeople, warehouse workers & customer service representatives. People liked BrightMart because it had low prices and became involved in the community, although it had many problems running well during busy times. Employees were unhappy because it became harder for them to plan their shifts, which is very important for keeping expenses down and providing great customer service. The company kept an eye on its workers by writing down their timetables by hand. Every store manager had to make a strategy for the week. They utilized spreadsheets and simple templates that had worked well for this job in the past. BrightMart hasn't utilized the scheduling and customization features of UKG Pro WFM well enough to keep track of time and accruals.

6.2. First Problems

Three problems that BrightMart's workforce planning teams still have to deal with are:

- Not Enough Shift Coverage: There weren't enough staff at busy times, yet there were too many during down times. This made customers less happy and made production less predictable. Store managers didn't have the resources they needed to help them predict demand or evaluate their workers in real time.
- The trouble with manual scheduling: It took a lot of time and effort to make shift plans for up to 100 workers at each location. Store managers spent 8 to 10 hours a week on this duty, which occasionally led to last-minute changes, mistakes, and unhappy employees who felt they were being treated unfairly.
- High rates of absenteeism: Unplanned absences were more than 12%, which was due to scheduling problems, tired workers, and not enough staff involvement. It was not possible to handle numerous absence patterns in a proactive way.

These worries had a direct effect on how clients saw the shop and how much money it made. BrightMart needed a scheduling system that was both flexible and advanced enough to handle real-world problems.

6.3. UKG Pro Workforce Management, Groovy Scripting, and AI-Enhanced Predictive Scheduling were all part of the solution that was put in place.

The goal of the transformation project was to make UKG Pro WFM better by adding custom Groovy scripts for automated scheduling and AI models for planning future work.

The main parts of the solution were:

- UKG Pro WFM Core Modules: Used for monitoring time, managing leave, making sure rules are followed, and basic shift assignments.
- Groovy Scripting Framework: The UKG WFM platform comes with custom scripts for rule-based automation. These scripts can check that breaks are being followed, allocate jobs based on skills, and find conflicts.

- Using AI models for predictive scheduling: Using middleware, external Python-based machine learning models that could anticipate peak demand times, absenteeism risks, and the best shift combinations were integrated. These models utilized past schedule data, leave trends, weather patterns, and events in the area.

6.4. Steps to Follow

BrightMart used a staged rollout method over the course of nine months, starting with a trial in ten sites and then extending to the whole company.

6.4.1. The responsibilities of those who have a stake in the project

Strategic planners for managing people and their work: Set rules for scheduling, union rules, and key performance indicators (KPIs) to use for judging performance.

- IT and UKG Managers: Made sure that technology was integrated, wrote Groovy scripts, and kept the platform secure.
- The Data Science Team worked on improving and building AI models that can forecast demand and absence.

Store managers and workers took part in pilot testing, gave comments, and went to training sessions.

6.4.2. How the AI Pipeline Is Set Up Data Ingestion

Time and attendance records, shift history, and weather and event data are all fed into the machine learning models.

- Model Output: Predictions about how likely it is that employees will be absent and how many people need to be at work every hour of the week.
- Feedback Loop: Actual attendance and work performance were added back into models to make them more accurate over time.

6.4.3. Making Groovy Scripts

Parts of the Script:

- Look into and report any differences in shifts
- Automated distribution based on skills and interests

Putting rules in place for overtime, small labor laws, and required breaks. Deployment: Version control was used to manage scripts, and they were tested in a sandbox environment before being put into full production.

6.4.4. Teaching and Speaking

Store managers learned about the newest AI-enhanced scheduling methods over the course of two days. Employees were told about improvements to the smartphone app that let them see and request shifts in real time.

6.5. Results Achieved

BrightMart said that six months after everything was put in place, there were big gains in important metrics:

- Shift Coverage: Coverage accuracy increased by 28%, especially on weekends and holidays. Managers may now create schedules that meet demand in just a few minutes.
- Cutting down on labor costs: Better shift optimization led to an 18% drop in overtime usage, which saved the company $2.1 million a year.
- Less absenteeism: The percentage of those who didn't show up dropped from 12.3% to 7.8% over the course of four months. This happened because predicting became better and there was greater room for change.
- Employee Feedback: 76% of the workers who were asked said they were happier with how clear and flexible their shifts were. The AI-driven fairness method, which was made clear via visual dashboards, helped people trust each other.
- Manager Productivity: The time spent on scheduling was cut by 70%, which allowed managers to focus on interacting with customers and improving team performance.

6.6. What we learned

BrightMart's project gave us useful information on how to use AI to make work more efficient.

- Iteration is Very Important: The earlier versions of the AI model were too focused on absence records, which gave certain people an unfair edge. It was important to improve and fine-tune fairness via a process that repeated itself.
- Testing Groovy programs in a sandbox environment puts worries about production to rest. We utilized test situations that were like actual scheduling problems to see how well the script worked and how well it made sense.
- Teaching stakeholders makes it easier to get them to use it: Store managers who had hands-on training and clear instructions were considerably better at following the present procedures. As employees learned more about how the system made decisions, they became more involved.

A steering committee made up of people from different departments met once a month to talk about AI suggestions and employee complaints. This made sure that things kept getting better and that the rules were followed.

7. Conclusion

The BrightMart case shows how UKG Pro WFM, Groovy scripting, & Artificial intelligence-powered predictive scheduling can all work together to make managers' duties easier. UKG's tight regulations for timekeeping & compliance, Groovy's automation tools, & ML ability to forecast the future can all help businesses run more effectively & make their employees happier. A practical solution to scheduling challenges led to a strategic workforce effort that helped managers do their jobs better, inspired employees, & made the company more money. Smart Human resources automation will be very important for how firms work. As Artificial intelligence models become more adaptable & platforms like UKG provide more API & scripting possibilities, there will be more ways to optimize in real time, align skills dynamically, keep an eye on workers' health proactively, & give each worker a unique experience. Artificial intelligence won't choose what instead, it will help people make better choices by giving them more information, making it easier to get things done, & helping them make judgments that are more fair & based on facts.

Companies that want to go in the same direction should plan ahead. They should start with pilot programs to make sure everyone is on the same page & integrate fairness & openness in Artificial intelligence models from the start. Give money to training, governance frameworks, & change management to develop trust & keep things functioning. First of all, don't see the stack as merely a bunch of tools. You could see it as a method to change the way people work & live. Artificial intelligence is already transforming how we plan, do, & make our work better. It will probably have a bigger impact on how we plan the workforce in the future. Businesses can make the workplace of the future more flexible, productive, & caring by deploying smart automation in a planned & cooperative way. It's an excellent idea to mix UKG, Groovy, & Artificial intelligence to maintain the workforce robust throughout time. It also improves technology.

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