

IFS Loops: Digital Workers for Utility Field Operations



The Reality Facing Utility Operations



Demand is surging

Electrification, data centers, and population growth are increasing workload faster than ever.



Outages are rising

Aging infrastructure and extreme weather are driving more frequent, complex disruptions.



Workforce is stretched

Skilled workers are harder to hire and retain, while experienced crews retire.

As these pressures intensify, so does the execution complexity, making it increasingly difficult for traditional operating models to keep pace and putting safety, reliability, and field crew performance at risk.

From Automation to Autonomy: Closing the Field Service Execution Gap

Utility field service teams often struggle not because of poor insight, but because execution cannot keep up. Work stalls between scheduling engines, field crews, and back-office systems. Automation breaks at exceptions. Decisions rely on manual follow-ups and fragmented knowledge. A single missed update, delayed exception, or unresolved knowledge gap ripples across service delivery, outage response, and customer commitments. As service volumes and workforce complexity grow, execution becomes the bottleneck, not strategy or data:



Schedule Quality: Incomplete job data, mismatched skills, and missing parts force constant manual replanning.



Dispatch Disruption: Outage response windows are tight. When dispatch decisions lag, restoration commitments slip and regulatory exposure grows.



Knowledge Gaps: Critical guidance is scattered across systems, documents and individuals. Hard to find, harder to trust.

IFS Loops Digital Workers are purpose-built to close these gaps, ensuring field work is coordinated, prioritized, and completed safely and on time.

What Are Digital Workers?

Digital Workers are AI-powered agentic personas designed to do the work, not just recommend actions. They continuously monitor conditions, understand utility workflows and constraints, make decisions within defined guardrails, and execute multi-step processes across systems. They carry decisions through to completion, escalating when human judgment is required instead of stopping at alerts or dashboards.

Think of them as digital colleagues for specific field service jobs, built to operate alongside people or independently as part of a governed digital workforce, based on your business, regulatory, and change management needs.

Why This Matters Now

With Digital Workers, utilities can grow, adapt, and absorb complexity faster, even as experienced workers retire and headcount growth slows, making reliable, affordable service at scale achievable.



The Field Service Digital Worker Portfolio

Purpose-built Digital Workers, each addressing a distinct field workforce execution challenge, all sharing the same governed IFS Loops platform.



Knowledge Manager

Context-aware knowledge discovery & answers

20–25% faster issue resolution

How It Works

Transforms fragmented enterprise knowledge into clear, trusted guidance available directly in the flow of work. Understands natural-language queries, retrieves from multiple sources, ranks by relevance and confidence, and flags knowledge gaps.

Key Capabilities

- Conversational query interpretation by intent, urgency & asset
- Multi-source search across manuals, job notes & resolved cases
- Confidence scoring and citation display for trust
- Knowledge gap detection and automated draft creation
- Context-aware retrieval for asset & configuration specifics



Service Planning Assistant

Optimized scheduling for changing demand & capacity

50–70% reduction in scheduling conflicts

How It Works

Operates between upstream service intake and downstream scheduling engines to improve schedule quality without replacing existing logic. Enriches job data, validates feasibility, and surfaces actionable intelligence.

Key Capabilities

- Job data enrichment using asset history and execution context
- Skill and duration validation before scheduling
- Parts and readiness checks to ensure execution feasibility
- Predictive demand forecasting and capacity planning
- Exception routing for missing data, skill gaps, or parts



Dispatcher Assistant

Optimized routing & SLA scheduling

30–50% reduction in manual reshuffling

How It Works

Continuously monitors live schedules, interprets exceptions, and assesses SLA impact. When disruption occurs, it analyzes feasible response options, supports customer renegotiation, and routes high-impact decisions to dispatchers with ranked, explainable options.

Key Capabilities

- Real-time exception detection across live operations
- SLA risk assessment with time-to-breach analysis
- Ranked reallocation options with full explainability
- Multi-channel customer appointment renegotiation
- Auto-proceed for low-risk actions, with escalation for high-impact decisions

Why This Is Not “Just Another Agent”

Not scripts. Not bots. Not workflows. IFS Loops Digital Workers differ in critical ways:



Outcome Ownership

Carries decisions through to completion instead of stopping at alerts or dashboards.



Context-Aware Execution

Understands field service exceptions, handoffs, SLA impacts, and downstream effects.



Governed Autonomy

Every action within defined rules, approvals, and audit trails, with human control where required.



Domain Intelligence

Trained on utility operations for targeted execution versus generic automation.

Digital Workers operate as long-running execution assets within and across enterprise systems. They are governed, observable, and continuously learn from real operational outcomes to refine decisions, thresholds, and exception handling over time.

Impact Beyond Automation

Digital Workers capture operational signals from systems and frontline channels, driving measurable improvements across the full field service lifecycle.



For Customers

- Faster response time and outage restoration
- Proactive communication when disruptions occur
- Fewer disruptions and service escalations
- Higher fault resolution and fewer repeat visits



For Field Crews

- Less time searching for knowledge and guidance
- Fewer manual coordination tasks and follow-ups
- Clearer schedule context and fewer last-minute changes
- More focus on skilled, value-added tasks



For the Organization

- Ability to absorb growth without adding headcount
- Increased execution capacity
- Sustainable productivity gains at scale
- Governed, resilient operations despite fragmented systems and operational variability

Controlled Autonomy by Design



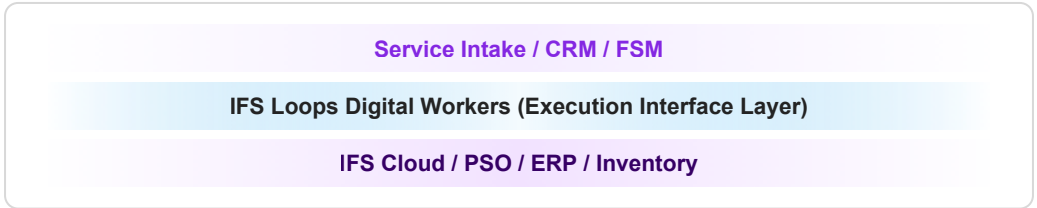
IFS Loops Digital Workers allow organizations to decide:

- Where human approval is required for execution
- Which processes can operate with full autonomy
- How to set up operational guardrails and policies
- How to define exceptions and escalation rules

Digital Workers can be governed, reviewed, and audited just like human workers, ensuring safe and compliant operation across regulated, safety-critical, and unionized utility environments.

How the Digital Workers Integrate

Digital Workers operate one layer above core scheduling and optimization engines, at the service execution interface layer. They replicate how a human dispatcher or planner works: interacting with schedules, jobs, and decisions through workbenches, Teams, and email APIs rather than directly manipulating optimization logic. This ensures faster deployment, lower integration complexity, and alignment with real operational workflows.



Built to Work With Your Existing Infrastructure

Digital Workers, powered by the IFS Loops platform, do not replace your core systems. They integrate with 75+ systems across ERP, FSM, EAM, planning, and communications, enabling end-to-end execution even across fragmented environments.



Communication Platforms

Microsoft Teams, Outlook/Exchange, SMS (Twilio), Salesforce Service Cloud



FSM / EAM Systems

IFS Cloud / FSM 6, Salesforce Field Service, MS Dynamics, IBM Maximo



Workforce & Skills

Workday, SAP SuccessFactors, skills matrices & certification systems



Scheduling Engines

IFS PSO, third-party optimization tools, custom scheduling services



Data & Analytics

Power BI, enterprise data platforms, SLA monitoring dashboards

Enterprise-Grade Governance & Trust

- Full transparency into every Digital Worker action
- Clear audit trails suitable for compliance and security reviews
- Role-based controls and access allocation aligned with enterprise security models



[Browse the Full IFS Loops Digital Worker Portfolio](https://ifs.com)
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