



IAMTech
EXPERIENCE NOT THEORY.

iPlan4.0 ST0

Shutdown, Turnaround & Outage (ST0) Performance Software

Engineer certainty every time the plant
is switched off.

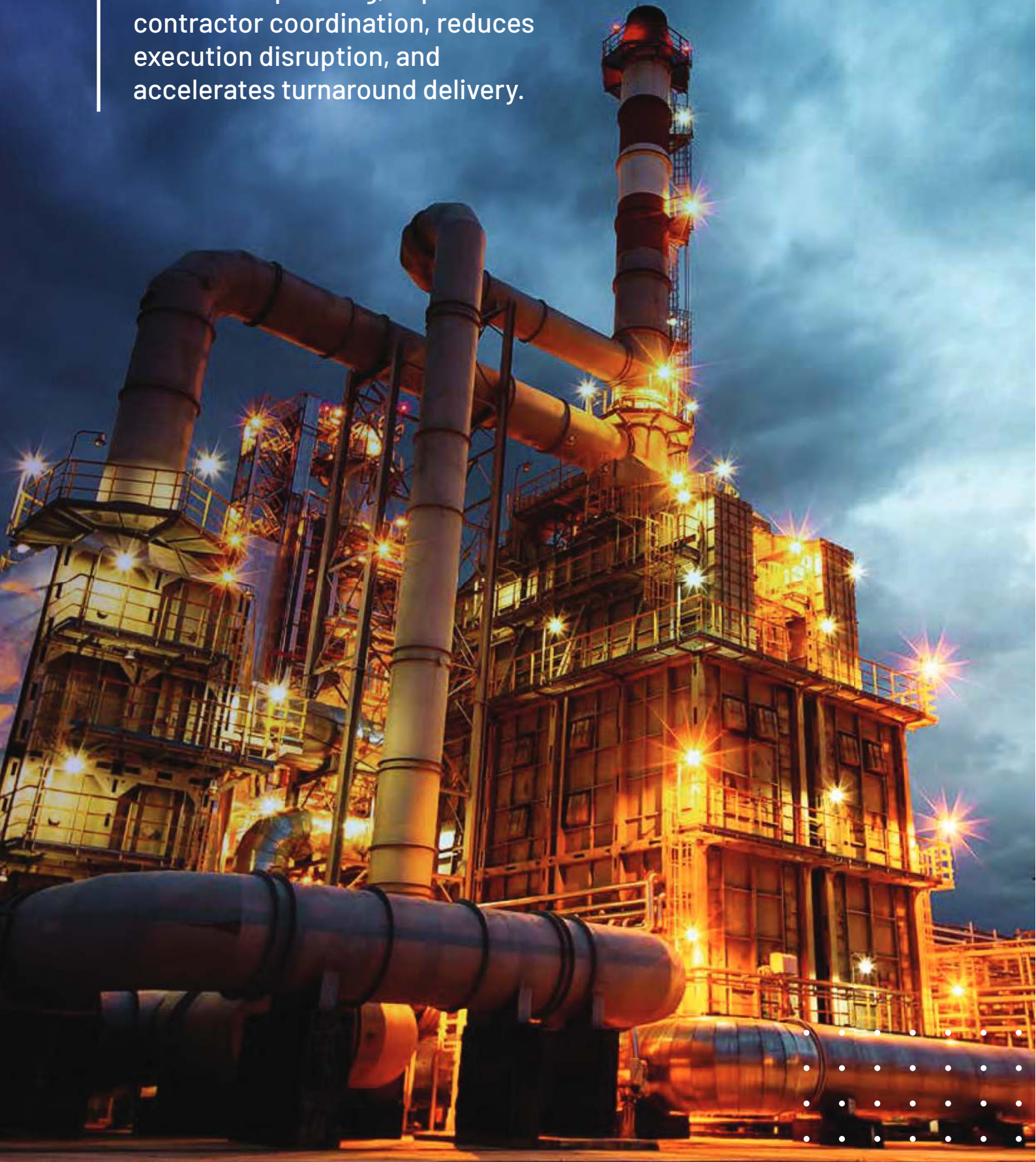
iPlan4.0 ST0 is an enterprise Shutdown, Turnaround & Outage (ST0) performance platform built to optimise scope, compress planning timelines, control execution risk, and accelerate return-to-service.

Combining AI-powered planning, risk-driven scoping, integrated scheduling, materials intelligence, and real-time execution visibility, iPlan4.0 ST0 transforms Turnaround delivery from reactive coordination into structured performance management.

From early scope identification through to completions and lessons learned, iPlan4.0 ST0 digitises and governs the entire ST0 lifecycle – enabling safer execution, lower cost delivery, and predictable Turnaround outcomes.

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Capturing shutdown data accurately, at scale, ensures realistic sequencing, improves contractor coordination, reduces execution disruption, and accelerates turnaround delivery.



Why Digitise Shutdown, Turnaround & Outage Delivery?



ONE PLATFORM ACROSS THE ENTIRE STO LIFECYCLE

Shutdown performance is determined by how effectively planning, scope, materials, contractors, and execution teams operate as one.

iPlan4.0 STO connects every STO phase into a governed, connected Turnaround. Coupled with AI you will feel fully supported by each of the following modules:

- ▶ Event initiation & Milestone governance
- ▶ Scope identification & justification
- ▶ Job planning & estimation
- ▶ Materials & contractor forecasting
- ▶ Schedule generation & optimisation
- ▶ Execution tracking & productivity monitoring
- ▶ QA/QC assurance & completions
- ▶ Close-out, archiving & lessons learned.

WHY THIS MATTERS



Capturing shutdown data accurately, at scale, ensures realistic sequencing, improves contractor coordination, reduces execution disruption, and accelerates turnaround delivery.

STANDARDISE ESTIMATION. INCREASE TOOL TIME.

iPlan's AI planning engine is trained on decades of industrial maintenance norms, productivity factors, and engineering standards.

From a simple work description, planners can generate achievable labour forecasts, realistic durations, and material requirements within seconds.



OUTCOME

Standardised estimating across the STO, accelerated planning productivity, improved workforce utilisation, and planning data that schedulers and leadership teams can trust.

REUSE SHUTDOWN INTELLIGENCE – DON'T RECREATE IT

Every shutdown generates operational knowledge – but most organisations fail to capture and reuse it.

iPlan4.0 STO builds structured libraries of work packs, job steps, materials, and execution performance that can be redeployed across future events.



OUTCOME

Up to 89% reduction in repeat planning effort and significantly improved scope predictability.

CONNECTED SHUTDOWN DATA ECOSYSTEM

iPlan4.0 STO integrates bi-directionally with ERP, EAM, and enterprise scheduling platforms – ensuring shutdown data flows seamlessly across systems.

Integrations include SAP, Maximo, IFS, Primavera P6, MS Project and other enterprise platforms.

Planning data – including resources, logic links, durations, and constraints – can be generated automatically and exported directly into scheduling environments.



WHY THIS MATTERS

- ▶ Eliminates duplicate data entry
- ▶ Improves planning accuracy
- ▶ Protects data integrity
- ▶ Enables real-time cross-team alignment

MOBILE EXECUTION & FIELD INTELLIGENCE

iPlan enables field teams to capture scope, progress, QA evidence, and execution updates directly onsite.



Advanced STO Capability



RISK-DRIVEN SCOPE GOVERNANCE

iPlan4.0 STO consolidates scope candidates from ERP notifications, inspections, reliability programmes, and operational requests into one governed environment, allowing you and your senior leaders, to sit together and have a focal point to determine your Turnarounds worklist consistently & efficiently.

AI Scoping tools further enhance your decision quality, through duplicate detection, risk coaching, and scope recommendations. You will have never built a better Turnaround work list in the past.

OUTCOME

Lean, risk-optimised shutdown scope aligned to operational priorities, that prevents you spending money planning work packs you later descope.



Scope items are evaluated using a powerful combination of:

► Structured risk modelling and economic justification tools including:

The Risk Assessment capability provides a structured, auditable method to evaluate and prioritise turnaround scope items. It combines likelihood, consequence, and economic value to ensure the final work list is optimised for safety, reliability, and production effectiveness.

► Monte Carlo Risk Analysis

The Monte Carlo Risk Simulator provides a probabilistic view of turnaround workload uncertainty using three-point duration estimates (best, most-likely, worst). The simulator calculates P10, P50, and P90 outcomes, the probability of meeting budget targets, and the contingency required to achieve confidence levels.

► Justification-Factor cost

The J-Factor measures whether the cost of executing work is justified by the reduction in business risk achieved.

J-Factor thresholds guide scope decisions, while mandatory safety or regulatory work is always included regardless of value.

AI-DRIVEN PLANNING & WORK BREAKDOWN GENERATION

iPlanAI generates structured job plans from work descriptions, drawings, photos and engineering documentation.

Outputs include sequential job steps, trade allocations, crew sizes, manhour estimates, duration forecasts, materials, cost modelling, and confidence scoring.

Planners retain full control – editing, regenerating, or refining AI outputs as required.

WHY THIS MATTERS



Once a planning team has more than one person, estimates of effort and cost range widely between each human. AI enhanced and enforced standardises across every single work order and activity, a sound planning logic, eliminating human bias, jet fuel accelerates your work pack creation, and improves shutdown forecasting reliability exponentially.



MATERIALS & CONTRACTOR SERVICES INTELLIGENCE

Execution success depends on material and contractor readiness.

iPlan4.0 STO integrates materials planning directly into job design — linking BOM data, consumables, spares, tools, and external services to each work order.

Capabilities include Turnaround wide bill of materials, instant part counts for all components, procurement tracking, cost modelling, and external contractor progress monitoring.



OUTCOME

Execution-ready work packs that prevent delays, shortages, and commercial disputes.

RUNNING THE MONTE CARLO SIMULATION AGAIN WITH DETAILED PLANNING DATA

Monte Carlo modelling simulates thousands of shutdown delivery scenarios again, but instead of using the three-point estimates from Scope Management meetings, you feed the detailed planning of labour steps.



OUTCOME

Leadership teams gain confidence curves for schedule completion and budget exposure before execution begins.

DIGITAL WORK PACK ENGINEERING & AI REVIEW

Generate structured work packs embedding labour steps, materials, isolations, permits, drawings, photos, line walk certificates, location details, and QA requirements.

Each work pack is digitally engineered to ensure execution readiness before shutdown mobilisation begins.

AI review tools assess:

- ✓ Completeness of scope and documentation
- ✓ Completeness of scope and documentation
- ✓ Labour feasibility and crew sizing
- ✓ Duration realism
- ✓ Cost accuracy
- ✓ Material fitness and availability
- ✓ Embedded risk exposure

Before packs are released to the field, iPlanAI validates whether the planned execution strategy is optimised — not just documented!

In an Offshore Shutdown case review, a planner submitted a recently executed FPSO tower work pack into the iPlanAI review engine. Within moments, the system identified that both planned labour hours and overall duration had been set significantly higher than required.

THE PLANNER CONFIRMED:



"That job was executed just last month — and it only took two-thirds of the planned time. If we'd had this capability, the vessel would have returned to service two days sooner."



AI-driven work pack assurance does not just improve planning quality — it directly protects shutdown revenue exposure at enterprise scale.

OUTCOME



Field execution teams mobilise with fully engineered, execution-ready work packs — eliminating ambiguity, reducing supervisor clarification time, and preventing incomplete or unsafe scopes reaching the workforce.

WHY THIS MATTERS



Production Recovery Value

Even marginal schedule gains in offshore shutdowns translate into major financial recovery.

When AI work pack validation improves planning accuracy and accelerates restart:

- ▶ **1 hour earlier production:**
~15,400 barrels recovered
≈ \$1.2M @ \$80/bbl
- ▶ **1 day earlier restart:**
≈ \$30M recovered production
- ▶ **2 days earlier restart:**
≈ \$60M recovered production

Isolation & Energy Control Management



Plan, visualise, and govern isolations and blinds across mechanical, electrical, instrument, and process systems within a single controlled environment.

iPlan4.0 STO enables shutdown teams to design and manage full energy isolation strategies – incorporating valve isolations, electrical lockouts, instrument isolations, line breaks, and process containment requirements – all aligned to specific work scopes and asset locations.

Isolation plans are digitally structured and embedded within work packs, ensuring field teams have clear, approved access conditions before execution begins.

CAPABILITIES INCLUDE:

- ▶ Isolation templates and standard methodologies
- ▶ Blind and spade registers
- ▶ Lockout/Tagout (LOTO) tracking
- ▶ Status monitoring and change governance
- ▶ Electronic approvals and authorisation capture
- ▶ Integration with permit and work control processes

WHY THIS MATTERS



Structured isolation governance eliminates energy control gaps, prevents unsafe access conditions, and ensures every workfront is released under fully authorised and auditable isolation states.

OUTCOME



Safer shutdown execution, improved compliance traceability, and reduced delay caused by isolation conflicts or rework.

Joint Integrity & Flange Management



Maintain full lifecycle visibility of joints and flanged connections across shutdown execution.

iPlan4.0 STO provides a permanent digital register of flange assemblies – capturing component specifications, gasket materials, bolt torque settings, inspection records, and assembly history – all linked directly to work scopes and asset hierarchy.

Joint records can be embedded within work packs and isolation plans, ensuring technicians execute assembly and reinstatement activities using verified specifications and approved procedures.

CAPABILITIES INCLUDE:

- ▶ Joint and flange inventories
- ▶ Piping specification linkage
- ▶ Torque and tightening requirements
- ▶ Inspection and test records
- ▶ Assembly sign-off workflows
- ▶ Historical intervention tracking

WHY THIS MATTERS



Digitised joint integrity management reduces leak risk, strengthens safety compliance, and ensures critical connections are reinstated to engineered standards before start-up.

OUTCOME



Improved containment assurance, faster QA closeout, and reduced post-shutdown integrity failures.



In-Built Scheduling & Gantt Execution Control

iPlan4.0 STO includes a fully integrated scheduling environment designed specifically for Shutdown, Turnaround & Outage execution – eliminating reliance on disconnected planning tools for day-to-day event control.

The in-built scheduling engine enables planners and execution leads to visualise, sequence, and optimise work orders directly within the STO delivery platform using an interactive Gantt interface.

Unlike static scheduling tools, iPlan4.0 STO allows authorised users to commit schedule adjustments directly through the Gantt view – automatically updating linked work orders, labour allocations, and progress records in real time.

This ensures that schedule changes are not isolated planning exercises, but fully integrated operational updates reflected across execution data.

USERS CAN:

- ▶ Build and refine activity sequences
- ▶ Apply logic links and dependencies
- ▶ Adjust durations and crew loading
- ▶ Model access, isolation, and resource constraints
- ▶ Visualise critical path exposure
- ▶ Scenario-test sequencing changes

WHY THIS MATTERS



Shutdown schedules evolve continuously as scope matures and execution realities emerge.

By enabling controlled, in-platform schedule modification:

- ✓ Planning and execution remain synchronised
- ✓ Progress reporting reflects real delivery conditions
- ✓ Resource conflicts are resolved earlier
- ✓ Critical path risk is actively managed

Execution Tracking & Productivity Intelligence



CORE API CAPABILITY COVERAGE



The exposed API framework enables structured integration across:

ASSET & MASTER DATA

- ✓ Equipment master records
- ✓ Functional locations
- ✓ Asset hierarchies

Ensuring shutdown work scopes are always aligned to live asset registers.

OPERATIONS & TASK STRUCTURES

- ✓ Planned operations exchange
- ✓ Work centre alignment
- ✓ Task sequencing updates

Supporting detailed execution planning integration.

MATERIALS & INVENTORY

- ✓ Material master synchronisation
- ✓ Stock availability updates
- ✓ Cost and classification data

Supporting accurate material planning and procurement readiness.

MATERIALS ALLOCATION & UPDATES

- ✓ Component allocations
- ✓ Purchase order references
- ✓ Delivery tracking
- ✓ Goods receipt updates

Providing live procurement and logistics visibility.

NOTIFICATIONS & SCOPE INPUTS

- ✓ Notification ingestion
- ✓ Defect and request capture
- ✓ Scope initiation records

Enabling structured scoping from operational maintenance systems.

ORDER STATUS GOVERNANCE

- ✓ Order approval states
- ✓ Completion status
- ✓ Cancellation or closure updates

Ensuring execution and ERP records remain aligned.

MAINTENANCE ORDERS

- ✓ Work order creation
- ✓ Order updates
- ✓ Scope-to-order alignment

Ensuring shutdown worklists remain synchronised with enterprise work management.

These integration services are illustrated across the core integration architecture — linking iPlan4.0 STO bidirectionally with your enterprise platforms.



MONITOR SHUTDOWN PERFORMANCE AS WORK HAPPENS — NOT AFTER IT FINISHES!

iPlan4.0 STO provides real-time execution visibility across labour, contractors, vendors, and emergent scope — enabling leadership teams to manage shutdown delivery dynamically rather than retrospectively.

Progress is captured at job step / P6 activity level, providing granular insight into workforce status, workforce deployment, and productivity performance.

DASHBOARDS AND ANALYTICS TRACK:

- ▷ Earned value performance
- ▷ Labour productivity rates
- ▷ Contractor progress
- ▷ Delay exposure and critical path risk
- ▷ Emergent work volume and impact
- ▷ Forecast completion curves

Field and office teams operate from a shared execution dataset — ensuring decisions are made using live operational intelligence.



WHY THIS MATTERS

Early identification of delays, productivity losses, or scope expansion enables corrective intervention before schedule impact escalates.



OUTCOME

Greater shutdown control, improved workforce utilisation, and more predictable delivery outcomes.

Assurance, Completions & Knowledge Capture



QA/QC & COMPLETIONS MANAGEMENT

Digitise quality assurance, inspection, and system handover workflows within a structured completions environment.

iPlan4.0 STO captures all inspection activities, test results, punch items, and non-conformance records directly against work scopes and asset systems – creating a live view of technical assurance readiness.

CAPABILITIES INCLUDE:

- ▶ Inspection test plans (ITPs)
- ▶ Digital check sheets
- ▶ Punch list management
- ▶ Non-conformance tracking
- ▶ Corrective action workflows
- ▶ System handover certification

OUTCOME



Accelerated mechanical completion, improved handover confidence, and faster plant start-up through real-time assurance visibility.

Assurance data is progressively compiled throughout execution – eliminating end-of-shutdown collation delays.

LESSONS LEARNED & EQUIPMENT HISTORY

Every shutdown provides operational insight – but without structured capture, that knowledge is lost.

iPlan4.0 STO records execution learnings, equipment performance observations, and maintenance improvement opportunities as part of the close-out process.

CAPTURED INTELLIGENCE INCLUDES:

- ▶ Planning accuracy reviews
- ▶ Execution productivity insights
- ▶ Failure mode observations
- ▶ Material performance feedback
- ▶ Contractor delivery assessments



These learnings are linked back to asset history and planning libraries – ensuring future shutdowns benefit from past execution experience.

WHY THIS MATTERS



Institutional knowledge is retained, planning accuracy improves, and maintenance strategies evolve using real operational evidence.

OUTCOME



Continuous shutdown performance improvement and stronger long-term asset reliability.



User & Organisational Enablement



DESIGNED FOR TURNAROUND PRACTITIONERS

iPlan4.0 STO is engineered specifically for STO delivery — not adapted from generic maintenance or project software.

The platform is structured around real shutdown workflows and is used by:

- ▷ Planners and schedulers
- ▷ Mechanical, electrical, and instrument engineers
- ▷ Supervisors and execution leads
- ▷ Inspectors and QA/QC teams
- ▷ Procurement and materials coordinators
- ▷ Contractors and service providers
- ▷ Turnaround and outage managers

ENTERPRISE COLLABORATION WITHOUT LIMITS

Enable full Turnaround collaboration within one governed platform.

iPlan4.0 STO supports unlimited users — including maintenance contractors, vendors, and specialist service providers — all operating within a shared turnaround dataset.

This ensures all stakeholders work from the same scope, plans, materials, and execution status without requiring expansion of ERP user licences or granting contractors direct access to systems such as SAP.

OUTCOME

Improved cross-organisation communication, reduced data duplication, and fully aligned shutdown execution teams operating within a controlled digital environment.



User interfaces, data structures, and workflows reflect how shutdowns are planned and executed — enabling rapid software adoption with minimal training overhead.



ABOUT IAMTech

IAMTech has supported industrial shutdown performance for decades – evolving from engineering service consultants into best independent industrial software vendor in the world.

Our platforms combine operational turnaround experience with advanced digital capability to help asset owners and contractors execute shutdowns with confidence, control, and measurable ROI.

IAMTech are a great company to work with, from the outset they have understood our business and have been able to come up with innovative solutions to meet our complex needs.

Kevin Robertson, Kaefer

Data control is excellent – when preparing for a shutdown getting the key data in place upfront is crucial. The ability to analyse planning data within iPlan is excellent.

Matt Ramsdale, SABIC

A useful, customised add-on to SAP, enabling third-party norms-based estimation and workpack generation for both routine maintenance and turnarounds.

Ben Foster, BP Chemicals

“We are not trying to be the biggest, we are trying to be the best!”

This software (iPlan) is really user friendly which is essential for our tradesman on the work-front.

Nick Thompson, DIAB Engineering

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THE CHOICE FOR SOME OF THE
BIGGEST NAMES IN INDUSTRY



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