AXIM

PREPARED FOR HARLAN PUMP WORKS · CAD PLATFORM AND DATA MANAGEMENT

Forty engineers, one platform, live before the ramp

A proposal to move Harlan Pump Works onto a new CAD platform and data management system, targeting go-live on March 15, 2027

THE NINETEEN-WEEK PLAN · SIX PHASES



KICKOFF
NOV 23, 2026

GO-LIVE
MON, MAR 15, 2027

CLOSEOUT
APR 2, 2027

PREPARED FOR	PREPARED BY	DATE	COMPANION DOCUMENT
Harlan Pump Works, Tulsa, Oklahoma Attention: Vice President of Engineering	Axim	November 2026	Statement of Work HPW-SOW-01 (for Harlan Purchasing)

Sample document. Companies, figures and dates are illustrative and do not constitute a live quote.

01 Executive summary

Harlan Pump Works designs on a legacy CAD system that forty engineers know well and that no longer carries the company where it is going. This proposal moves all forty onto a new CAD platform with a data management vault underneath it, and lands the switch **before your spring production ramp, targeting March 15, 2027.**

The whole plan is built around one judgment: **not every file deserves the same treatment.** Of roughly 18,000 legacy part files, about 900 are the parts your engineers open every week: the impellers, volutes, shafts and bearing frames on current pump lines. Those 900 are rebuilt as native parametric models with their design intent intact. The remaining ~17,100 are imported as they are, with their metadata and revisions mapped into the vault, searchable and usable on day one, and rebuilt only if and when an engineering change touches them.

That split is what makes March 15 achievable. It puts full editability exactly where the work is, keeps the migration to a size a team can finish in a winter, and means no engineer goes into the ramp hunting for a part.

AT A GLANCE

40
engineers moving to one platform

18,000
legacy part files in the library

900
critical parts rebuilt as native models

~17,100
files imported as-is, metadata and revisions mapped

Mar 15, 2027
target go-live, before the spring production ramp

WHAT HARLAN RECEIVES

- 40 CAD subscriptions and 2 data management administrator subscriptions, live and configured.
- A configured vault: part numbering, lifecycle states (Work in Progress, In Review, Released, Obsolete), approval workflow, templates and title blocks built to Harlan's standards.
- 900 critical parts rebuilt as native models, each validated against its legacy geometry; ~17,100 files imported as-is with metadata and revision mapping.
- 120 person-days of training in three waves, scaled to role: Essentials for all 40, Advanced Drawings for 12, Data Management Administration for 2.
- Two Axim applications engineers on your floor for go-live week, March 15 to 19, 2027.
- The whole migration (triage, the 900 rebuilds, the ~17,100 imports, configuration and project management) under one fixed implementation fee: a capped cost, not time and materials.

THE INVESTMENT

	ANNUAL (RECURRING)	ONE-TIME
Software subscriptions	$181,000	
Migration services, fixed implementation fee		$165,000
Training		$78,000
On-site go-live support		$18,500
Subtotals	**$181,000**	**$261,500**
Year-one total		**$442,500**

From year two, the recurring subscription of $181,000 a year carries forward at the price list then current; the one-time implementation does not recur.

02 Why move, and what moving means for forty engineers

A CAD migration is not a software purchase. It is forty people changing the tool they think with, in the same winter they are preparing a production ramp. So the plan is judged on one question before any other:

Does engineering keep shipping while it moves?

WHY NOW

Your legacy system stores geometry; it does not manage it. Revisions live in folder names and in people's memory, and the only proof of which file is released is whoever last saved it. A data management vault changes that at the root: one released revision per part, a recorded approval behind every release, and a where-used answer in seconds instead of an afternoon. Moving before the ramp means the ramp runs on controlled data. Moving after it means running the busiest quarter of the year on the system you have already decided to leave.

WHAT CHANGES FOR AN ENGINEER

On March 15 an engineer at Harlan opens the new platform, searches the vault for a part number, checks it out, edits a native model with its full feature tree, and checks it in for review. The drawing updates with the model. The part they need from 2014 is there too: imported, viewable, placeable in an assembly, and flagged so they know it is reference geometry.

HOW CONTINUITY IS PROTECTED

Nobody trains months early and forgets.

Essentials runs in the first two weeks of February, Advanced Drawings in the second half of February. Every engineer finishes training within five weeks of go-live, and trains on Harlan's own migrated parts, not a vendor's sample bracket.

Three quarters of the team is always at their desks.

Training runs in cohorts of ten (Essentials) and six (Advanced Drawings), so no week pulls the whole department off the work.

The legacy system is frozen, not switched off.

It goes read-only on the evening of March 11 and stays available for reference. Nothing is deleted, and nothing is lost if someone needs to check an old file.

The switch has a gate.

A go/no-go review on March 10 tests named conditions. If they are not met, we say so on March 10, not on March 15.

THE CONTINUITY CALENDAR

Feb 2 to 25	75%	Mar 10	Mar 11, 5 pm
ENGINEER TRAINING, ON HARLAN'S OWN PARTS	OF THE TEAM AT THEIR DESKS IN ANY TRAINING WEEK	GO/NO-GO REVIEW AGAINST NAMED CONDITIONS	LEGACY FROZEN READ-ONLY, NOT SWITCHED OFF

03 Data strategy: rebuild what you work on, import what you keep

This is the decision that shapes the entire engagement, so the reasoning is laid out in full.

3.1 Two kinds of file

Harlan's 18,000 legacy part files are not one population. They are two.



900 · 5%

THE WORKING SET · REBUILT AS NATIVE MODELS

The working set: about 900 files, 5% of the library. These are the parts that move: on active bills of material for current pump lines, revised in the last two years, the base geometry for families such as impeller trims and casing variants, or released into the products the spring ramp will build. An engineer touches some of them every day. Every engineering change order lands on them.

~17,100 · 95%

THE ARCHIVE · IMPORTED AS-IS

The archive: about 17,100 files, 95% of the library. Discontinued models, superseded revisions, one-off customer specials, purchased-part geometry, fixtures from programs long closed. They must be kept, found and referenced. They are rarely, if ever, edited.

3.2 Why the 900 are rebuilt as native models

An imported file arrives as a solid with no history: the shape is right, but the reasons behind the shape are gone. For a part that changes, that is the expensive half.

Feature trees and design intent.

A native impeller carries its vane count, its trim diameter and its hub bore as driving dimensions. Change the trim and the model, its drawing and every assembly it lives in follow. An imported impeller makes that same change a manual surgery on dead geometry.

Families and configurations.

Harlan's product lines are families: one casing, several flange patterns; one impeller, several trims. Native models carry those as configurations of a single part. Imported solids carry them as unrelated copies that drift apart.

Associative drawings.

A native drawing updates when the model does. Rebuilt parts come with their drawings regenerated against the native model, so the drawing a machinist reads is always the released geometry.

Downstream reuse.

The native model is the one that feeds simulation, CAM, and additive builds cleanly. The parts most worth reusing are exactly the 900.

If these parts were imported as-is, every engineering change in the ramp would fight the geometry, and engineers would quietly keep the legacy system open to do real work. That is the failure this plan exists to prevent: two systems running in parallel through the busiest quarter of the year.

3.3 Why the ~17,100 are imported as-is



Rebuilding a part costs engineering hours whether or not anyone ever edits it again. At a planning figure of two hours a part, rebuilding all 18,000 would be 36,000 hours: about eighteen engineer-years, and no version of that finishes before spring. Rebuilding the 900 at the same planning figure is about 1,800 hours, work a focused team completes inside the six-week production migration.

The archive does not need parametric fidelity. It needs to be **found, trusted and used.** The import delivers all three:

Found.

Each file is checked into the vault with its part number, description, revision, material and lifecycle state mapped from the legacy record. A search for a 2011 seal housing returns it in seconds.

Trusted.

Revision history is mapped, so the vault knows which revision is current. Files that fail to import cleanly are logged on an exception list with the reason; nothing fails silently.

Used.

Imported geometry opens, measures, and places in assemblies. Small changes can be made with direct editing.

3.5 How the 900 are chosen

The list is built from evidence and signed by Harlan engineering. In Discovery, Axim's implementation team scans all 18,000 files and ranks each against four tests:

1. On a bill of material for a product line currently in production or scheduled for the spring ramp.
2. Modified or released in the last 24 months.
3. Referenced by three or more assemblies.
4. Serves as a family or configuration master.

Files that pass any of these are candidates. Harlan's engineering lead reviews the ranked list with Axim's applications engineers and signs the final 900. If the evidence points to materially more or fewer than 900, the difference is raised and settled before any rebuild begins, never discovered at the end.

3.4 · REBUILD ON TOUCH

The split is not permanent, and it does not have to be perfect on day one. After go-live Harlan adopts a simple rule: **when an engineering change touches an imported part, that part is rebuilt natively as part of the change.** The cost of a rebuild is then paid only at the moment the part proves it is still alive. Over time the native library grows to match the work actually being done, and the archive stays quiet.

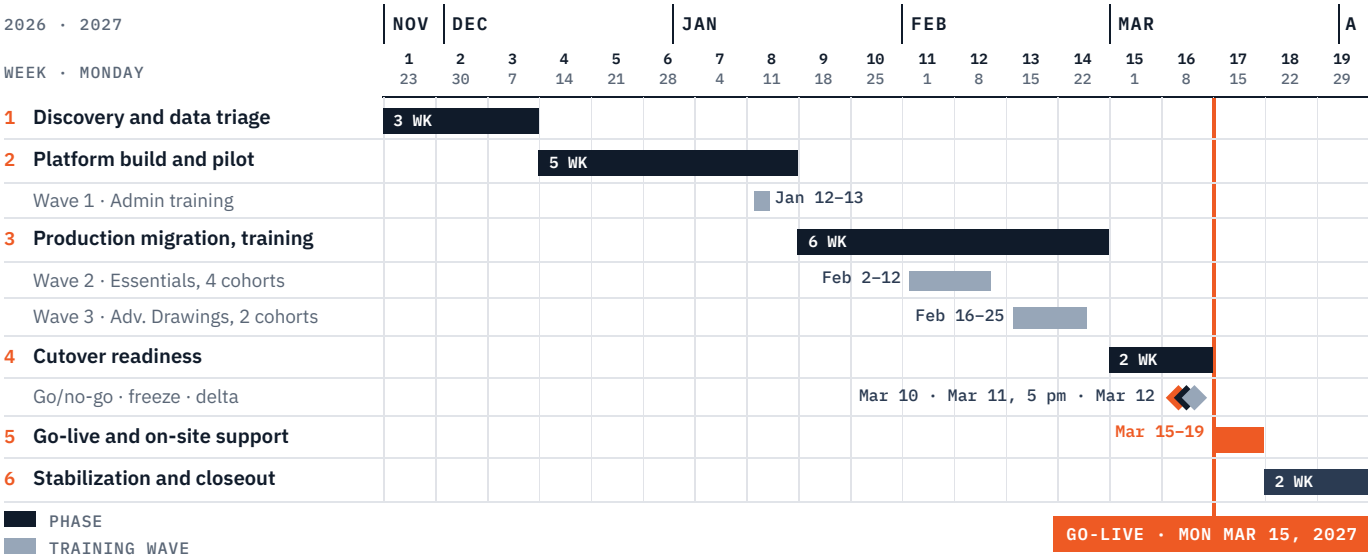
3.6 How each rebuild is proved

No errors	±0.1%	±0.001 in	Named dimensions	Same dims and tolerances
MODEL REGENERATES	VOLUME AND MASS PROPERTIES	OVERALL DIMENSIONS	DRIVE CRITICAL FEATURES	REGENERATED DRAWING

A rebuilt part is accepted when it matches its legacy original on measurable terms: it regenerates without errors, its volume and mass properties fall within ±0.1% of the legacy file, its overall dimensions fall within ±0.001 in, its critical features are driven by named dimensions, and its regenerated drawing carries the same dimensions and tolerances as the legacy drawing. These are the same conditions Harlan Purchasing signs in the Statement of Work.

04 Timeline: built backward from March 15, 2027

The plan runs nineteen weeks, from kickoff on November 23, 2026 to closeout on April 2, 2027. It assumes the Statement of Work is signed and a purchase order issued by **November 18, 2026**; each week past that date comes out of the schedule's buffer.



PHASE	DATES	DURATION	WHAT HAPPENS
1. Discovery and data triage	Nov 23 to Dec 11, 2026	3 weeks	Kickoff; inventory and classify all 18,000 files; build and sign the critical 900 list; agree CAD and vault standards; confirm IT readiness
2. Platform build and pilot	Dec 14, 2026 to Jan 15, 2027	5 weeks (includes the holiday week)	Subscriptions activated; vault installed and configured; templates and workflow built; pilot migration of 25 native rebuilds and 500 imports, validated; administrator training, Jan 12 to 13
3. Production migration and engineer training	Jan 18 to Feb 26, 2027	6 weeks	Remaining 875 native rebuilds in weekly batches; bulk import of ~16,600 remaining files; Essentials Feb 2 to 12; Advanced Drawings Feb 16 to 25; one week of buffer held inside the phase
4. Cutover readiness	Mar 1 to Mar 12, 2027	2 weeks	Full acceptance testing; engineers practice on migrated data; go/no-go review Mar 10; legacy frozen read-only Mar 11, 5:00 pm; delta migration Mar 12
5. Go-live and on-site support	**Mar 15 to Mar 19, 2027**	1 week	Live on the new platform; two applications engineers on the floor all week
6. Stabilization and closeout	Mar 22 to Apr 2, 2027	2 weeks	Remote follow-through on open issues; final acceptance; handover of documentation

Why this sequence. Discovery comes first because the 900 list decides everything after it. The pilot runs before the holiday so problems with real Harlan data surface in December, while there is still time to fix them. Administrators train in January so they help run the bulk migration. Engineers train in February, close enough to go-live to remember it and on their own parts. And the two weeks of March before go-live are deliberately quiet: testing, practice, and a decision, with no new work started.

05 The training program

Training is scaled to what each person will do on March 15, delivered at Harlan's Tulsa facility, and run on Harlan's own migrated parts.

WAVE 1 · JANUARY

Data Management Administration

2	2	4
ADMINS	DAYS	PERSON-DAYS

January 12 to 13, 2027

For the two people who will own the vault. Users and groups, permissions, lifecycle states and workflow, check-in and check-out rules, backups and restores, and how to run an import. Taught before the bulk migration so the administrators help run it and know how their vault was built.

WAVE 2 · FEBRUARY

Essentials

40	2	80
ENGINEERS	DAYS	PERSON-DAYS

Four cohorts of ten, February 2 to 12, 2027

The working day on the new platform: sketching and features, parts and assemblies, configurations, basic drawings, and the vault routine of search, check out, edit, check in, submit for review. Each engineer finishes by modeling a Harlan part, placing it in an assembly, detailing it and checking it into the vault.

A	Feb 2 to 3
B	Feb 4 to 5
C	Feb 9 to 10
D	Feb 11 to 12

WAVE 3 · FEBRUARY

Advanced Drawings

12	3	36
ENGINEERS	DAYS	PERSON-DAYS

Two cohorts of six, February 16 to 25, 2027

For the engineers who release drawings to the shop. Harlan's title blocks and drawing templates, GD&T annotation, section and detail views of castings, bills of material and balloons, revision tables, and drawing release through the vault workflow.

1	Feb 16 to 18
2	Feb 23 to 25

TRAINING, PRICED AT $650 PER PERSON PER DAY

WAVE	PEOPLE	DAYS EACH	PERSON-DAYS	RATE	LINE
Essentials	40	2	80	$650	$52,000
Advanced Drawings	12	3	36	$650	$23,400
Data Management Admin	2	2	4	$650	$2,600
Training total			**120**		**$78,000**

06 On-site go-live support

Go-live week is where a migration is won or lost, so two Axim applications engineers are on Harlan's floor from Monday, March 15 to Friday, March 19, 2027: ten engineer-days.

WHAT THEY DO

- **Monday morning, first login.** Walk the floor as every engineer opens the platform and the vault for the first time; clear access, license and path issues on the spot.
- **At the desk, not on a ticket queue.** Sit with engineers on live work: the first engineering changes, the first released drawings, the first rebuild-on-touch of an imported part.
- **First release, end to end.** Take the first production release through the full workflow with Harlan's approvers, so the process is proved on a real part in week one.
- **Shadow the administrators.** Pair with Harlan's two vault administrators on permissions, stuck check-outs and workflow questions until they are handling them alone.
- **Keep a daily issue log.** Every issue is recorded with its severity, owner and status, reviewed with Harlan's project lead at the end of each day, and handed over at the end of the week.

ON THE FIVE DAYS

The client's scope named two engineers on site for go-live; the five-day window is the standard go-live week and is set here as an assumption. Harlan can lengthen or shorten it at the same rate of $1,850 per engineer per day, and the investment changes by exactly that arithmetic.

ON-SITE GO-LIVE SUPPORT

Engineers	2
Days	5
Engineer-days	10
Rate	$1,850
Line	**$18,500**

07 Risks, and what we do about them

RISK	WHAT IT WOULD COST	MITIGATION	OWNER
The critical list grows past 900	Rebuild effort outruns the schedule	Evidence-based list signed in Discovery; any change goes through change control before rebuild starts; rebuild-on-touch absorbs the rest after go-live	Shared
Legacy data is in worse shape than it looks (broken references, missing files, duplicate part numbers)	Import failures surface late	Full inventory in Phase 1; pilot on real data in Phase 2; every failure on an exception list with its reason; Harlan decides each disposition	Shared
Engineers pulled off training by year-end or ramp work	Untrained users at go-live	Cohorts of ten keep 75% of the team at their desks; dates published in December; one makeup seat per cohort	Harlan
IT not ready (server, workstations, network access)	Phase 2 slips	Readiness checklist issued at kickoff, due December 11; workstation specification provided in week one	Harlan
Go-live readiness in doubt	A failed switch during the ramp	Go/no-go on March 10 against named conditions; legacy stays read-only and available; nothing is deleted	Shared
Productivity dip after go-live	Slower engineering in ramp prep	Two engineers on the floor all week; quick-reference guides at every desk; trained administrators in place before day one	Axim

08 The investment

All figures are from Axim's current price list. Software is an annual subscription; implementation services are one-time.

YEAR-ONE TOTAL

$442,500

$181,000 recurring + $261,500 one-time



$181,000 Subscriptions, recurring

$165,000 Migration services, fixed fee

$78,000 Training

$18,500 On-site go-live support

RECURRING: ANNUAL SUBSCRIPTION

ITEM	QUANTITY	UNIT PRICE	ANNUAL
CAD subscriptions	40 seats	$4,200 / seat / yr	$168,000
Data management administrator subscriptions	2 seats	$6,500 / seat / yr	$13,000
Recurring subtotal			**$181,000 / yr**

YEAR ONE

	AMOUNT
Recurring subscription, year one	$181,000
One-time implementation	$261,500
Year-one total	**$442,500**

PER ENGINEER, YEAR ONE

$11,062.50

$442,500 ÷ 40 engineers

FROM YEAR TWO

$4,525

$181,000 ÷ 40 engineers, a year

ONE-TIME: IMPLEMENTATION SERVICES

ITEM	CALCULATION	AMOUNT
Training, Essentials	40 people × 2 days × $650	$52,000
Training, Advanced Drawings	12 people × 3 days × $650	$23,400
Training, Data Management Admin	2 people × 2 days × $650	$2,600
On-site go-live support	2 engineers × 5 days × $1,850	$18,500
Migration services, fixed implementation fee	Fixed fee, scope below	**$165,000**
One-time subtotal	$78,000 + $18,500 + $165,000	**$261,500**

WHY FIXED

The fee is committed scope, not time and materials. If the rebuilds take Axim longer than planned, that is Axim's cost, not Harlan's. It moves only through a signed change order, and only for the conditions named in the Statement of Work: a critical list outside 855 to 945 parts, or a legacy library more than 5% larger than 18,000 files. The fee is invoiced in four parts, each on Harlan's written acceptance of a phase, with the last 20% held until final acceptance.

WHAT THE MIGRATION FEE BUYS

One fixed fee of $165,000 covers the labor of the migration end to end:

- **Triage and selection:** inventory and classification of all ~18,000 legacy files, and the evidence-ranked Critical Set list Harlan signs.
- **900 native rebuilds:** each re-modeled with its feature tree, driving dimensions and configurations, its drawing regenerated, and each proved against the Rebuild Validation Test.
- **~17,100 as-is imports:** checked into the vault with metadata and revision history mapped, legacy drawings linked, failures logged on the exception list, and the set proved by a sampled Import Validation Test.
- **System configuration:** the CAD platform and vault set up to Harlan's standards: part numbering, data cards, lifecycle states, the release workflow, part, assembly and drawing templates, and title blocks.
- **Delta migration** of files changed before the freeze, and **project management** across the engagement to the March 15, 2027 go-live and closeout.

Sales tax, where applicable, is not included. Travel and living expenses for on-site work are billed at cost, outside the totals above, as set out in the Statement of Work.

09 Who we are

Axim resells and supports CAD software and industrial 3D printers for manufacturers. The people on this engagement are the Axim implementation team that will run it: a project lead who owns the schedule, applications engineers who rebuild the critical parts and lead the training, and the two applications engineers who will be on Harlan's floor for go-live.

10 Next steps

1. **Review** this proposal and the companion Statement of Work, HPW-SOW-01.
2. **Name** Harlan's project lead, engineering lead, IT contact and the two vault administrators.
3. **Sign** the Statement of Work and issue a purchase order by **November 18, 2026**, so Discovery starts on November 23 and the schedule holds for March 15, 2027.

This proposal is valid for 30 days from its date of issue.

Axim

PRESENTED BY

TITLE

DATE

Harlan Pump Works

RECEIVED BY

TITLE

DATE

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