



deXcent

Selecting the Right Historian for Your Enterprise

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CHAPTER 1

Why Historian Decisions Are Strategic

MOST INDUSTRIAL ORGANIZATIONS THINK OF THEIR HISTORIAN AS THE PLUMBING IN THEIR DATA SYSTEM...

a database that collects time-series data and keeps it flowing to where it's needed. But a historian isn't just plumbing. It's the nervous system of your enterprise. And the way you design it (and the way you choose it) will determine how well your organization can **sense, respond, and evolve**.

The truth is that companies don't decide on a historian strategically. They inherit one. A legacy system chosen decades ago. A vendor relationship that started with a single site and spread by habit. A patchwork of upgrades and patches that now barely hold together.

And yet, that unexamined choice quietly defines the ceiling for everything you're trying to do, everything from predictive maintenance to enterprise-wide visibility to the next wave of AI and machine learning. If the data foundation is brittle, nothing above it scales cleanly.

That's why this isn't just a technical decision. It's a business one. The historian you choose shapes how information moves, how decisions get made, and how fast your organization can adapt to change.

The Invisible Backbone of Industrial Intelligence

Every modern industrial enterprise runs on two nervous systems.

ONE CONTROLS > THAT'S OT.

THE OTHER INFORMS > THAT'S IT.

The historian sits at the intersection, capturing the signals of reality from sensors, PLCs, and DCS systems and translating them into something the business can understand

When it works, it's seamless. Operations can see performance in context. Engineers can trust the data they're analyzing. Executives can see cause and effect across the value chain.

But when it doesn't? You feel it everywhere.

Operators wait on lagging dashboards. Engineers spend hours cleaning and stitching data that should have been contextualized upstream. Executives make decisions based on partial truth, and the organization pays for it in lost efficiency, compliance risk, and missed opportunities.

The historian is where reliability, safety, and insight intersect. It's where your organization learns (or fails to learn).

The Problem Most Organizations Don't See Coming

When teams talk about “**digital transformation**,” the historian rarely comes up first. **It's too deep in the stack. Too familiar to seem exciting.** But here's the catch: every transformation plan that ignores it eventually collides with it.

The legacy systems running in most plants were never built to scale across an enterprise. They were built for one site, one process, one control room. They capture the data efficiently, but not the context of the data. They store it securely but not accessibly. They serve the plant, not the business.

So, when you try to layer modern analytics, asset performance management, or ESG reporting on top of that fragmented foundation, you hit the same wall: disconnected data, inconsistent naming, and systems that can't talk to each other.

And that's when digital transformation starts to stall. Not because the vision was wrong, but because the historian couldn't keep up.

Why This Decision Matters Now

Industrial operations are evolving faster than ever. Hybrid architectures. Edge analytics. Cloud integrations. New Cyber Security mandates. Data residency laws. AI models that depend on clean, contextualized data.

Every one of these changes depends on your historian. And the pace of change means you can't afford to treat historian selection like a one-time procurement event. It's a strategic platform choice that will influence how your organization captures value from data for the next decade.

Choose reactively, and you'll spend years fighting your infrastructure. Choose deliberately, and you'll accelerate everything built on top of it.

This guide is here to help you do the latter. It's important to move beyond feature lists and vendor hype, and make a decision grounded in **strategy, architecture, and future readiness.**

From Data Storage to Strategic Advantage

At Dexcent, we see a clear pattern among organizations that get this right.

They don't start by asking, "**Which historian should we buy?**"

They start by asking, "**What role do we need our historian to play in how we operate and grow?**"

They treat it not as a data project, but as a transformation milestone. Something that is part of a broader journey to modernize how **people, processes, and technology work together.**

That's why our framework — **STRATEGIZE • TRANSFORM • EVOLVE** — runs through this entire eBook. It's the lens that turns a technical upgrade into a competitive advantage.

STRATEGIZE:

Align on what success looks like across OT, IT, and the business.

TRANSFORM:

Implement in a way that builds adoption, security, and reliability from day one.

EVOLVE:

Continuously extend value through analytics, automation, and performance insight.

This approach reframes historian selection as part of a maturity journey instead of a one-off purchase. And that shift in mindset is often the single biggest determinant of long-term success.

The Cost of Getting It Wrong

When a historian isn't chosen with enterprise-level intent, the symptoms show up slowly. Data silos multiply. Operations rely on shadow systems to get around limitations. IT struggles to maintain inconsistent deployments. Every new initiative takes longer and costs more.

By the time leadership realizes the historian is the constraint, **the organization is buried under technical debt.** You can't innovate on a foundation that wasn't designed for the load.

That's why this eBook starts here, with **strategy, not specs.** Because every successful digital transformation starts with a historian that's **designed to serve the future, not the past.**

A New Way to Think About the Historian

This isn't about replacing one vendor with another. **It's about rethinking what the historian is.** It's not a passive archive. It's the operational brain that's capturing experience, context, and insight. It's what makes improvement possible.

In the chapters ahead, we'll walk through how to recognize when your current system has reached its limit, how to evaluate new options with confidence, and how to build consensus around the right choice for your enterprise.

Because when you get this decision right, everything else — **visibility, reliability, sustainability** — gets easier.

And when you get it wrong, no amount of analytics can save you.

CHAPTER 2

What an Enterprise Historian Does in a Modern OT and IT Ecosystem

FOR DECADES, OPERATIONS TEAMS HAVE TREATED THE HISTORIAN AS AN ISLAND.

It was a trusted, if isolated, source of truth for what happens on the plant floor. It is where engineers go when they need to understand what happened, when it happened, and what might happen next.

But the world around that island has changed. IT now reaches into the control room. Cloud applications are reshaping data architectures. AI and analytics teams are asking questions that legacy historians were never built to answer.

Suddenly, the historian is no longer just an engineering tool. It has become the bridge between how your operations perform and how your business competes.



THE HISTORIAN'S TRUE ROLE:

Context, Not Just Collection

If you ask most teams what a historian does, they will usually say that it stores time-series data. That is true, but it is also like saying a refinery just boils oil.

What makes a historian valuable is not what it stores but how it organizes that data into context you can trust. The moment you need to know why an asset failed, why a process deviated, or how one facility performs better than another, context is everything.

Raw data tells you something happened. Context tells you why.

A modern enterprise historian does not simply capture data. It curates it. It aligns data from sensors, systems, and events into a coherent narrative of your operations that IT, OT, and business stakeholders can all understand.

When that context is missing, every downstream system from analytics to reliability to reporting must reinvent it. That is where your effort and your value disappear.

OT AND IT: **TWO WORLDS, ONE REALITY**

OT data and IT data speak different languages. OT is continuous, streaming, fast, and precise. IT is transactional, event-based, structured, and designed for business logic.

For years, the two worlds operated separately.

OT MANAGED UPTIME. IT MANAGED INSIGHT.

Digital transformation has forced a collision between them.

Now, reliability engineers want to merge asset health data with maintenance histories. Finance wants real-time production KPIs tied to cost. ESG teams want energy and emissions metrics derived directly from operational data streams.

That is where the historian sits, right at the fault line between control and information, translating between them.

The historian becomes the bridge, aligning OT's continuity with IT's structure so that your enterprise finally speaks one operational language.

However, this is where many organizations stumble. They connect systems but not strategy. They move data without addressing the governance and modelling needed to make it meaningful.

At that point, **the historian stops being a bridge and starts becoming a bottleneck.**

From Plant to Enterprise

Plant historians were built for a simpler world: one site, one process, one set of users. They were local by design, optimized for engineers sitting near the control room.

Enterprise historians are different. They are built for scale across plants, countries, and teams.

An enterprise historian must:

- **Aggregate** data from multiple sites with consistent quality and naming standards
- **Provide** secure access to IT and analytics teams without compromising OT networks
- **Handle** millions of tags and decades of history without performance loss
- **Support** hybrid architectures that span edge, on-premises, and cloud environments

When this works, the enterprise historian becomes the single source of operational truth. It becomes the foundation that can feed every department, report, and initiative.

When it fails, it turns into another silo, only larger, more expensive, and harder to change.



The Evolution of the Historian

If you think of the historian as a static product, you will always be behind. Historian technology has evolved through three distinct eras.

1. THE LOGGING ERA

Early historians focused on reliability and compression. The goal was simple: collect as much data as possible without losing it or overloading the network.

2. THE INTEGRATION ERA

As systems multiplied, integration became the main challenge. Historians had to talk to SCADA, MES, ERP, and analytics platforms. APIs and standard protocols such as OPC and MQTT became essential.

3. THE INSIGHT ERA

Today, data needs to be modelled, governed, and enriched for consumption by AI, BI, and cloud analytics. Historians must support asset frameworks, event detection, and semantic layers. The question is no longer whether we can collect the data, but whether we can trust it to make decisions.

Each era expanded not only the technology but also the historian's role in business performance. It is no longer just the backbone of control systems. It is now **the foundation for enterprise learning**.

The Human Layer

Here is the irony: the more advanced your historian becomes, the more human alignment it requires.

IT teams worry about architecture, cloud strategy, and cost.

OT teams worry about uptime, latency, and control.

Executives worry about compliance, visibility, and ROI.

Without alignment, the historian becomes a political football. Every team pulls in its own direction.

The best enterprises do not simply deploy historians. They design operating models around them. They define who owns data governance, how change management works, and how each function consumes data responsibly.

**TECHNOLOGY ALONE DOES NOT BRIDGE THE OT-IT GAP. CULTURE DOES.
AND THE HISTORIAN IS WHERE THAT CULTURE BECOMES VISIBLE.**

The Historian as Enabler

In a mature ecosystem, the historian quietly enables everything around it:

- **Reliability** through continuous monitoring, root cause analysis, and predictive insights
- **Efficiency** through energy optimization, process tuning, and performance benchmarking
- **Compliance** through secure, auditable records of operations and environmental metrics
- **Innovation** through data readiness for analytics, machine learning, and digital twins

It is not a cost center. It is a capability engine.

When data moves seamlessly from the plant to the boardroom, contextualized, trusted, and secure, your historian stops being infrastructure and becomes an advantage.

A Different Way to Think About It

Ask yourself a simple question: if your historian disappeared tomorrow, what would break? If your answer is "a few dashboards," you are underutilizing it. If your answer is "our ability to see, learn, and act," you understand its true value.

The historian is not a record of the past. It is the foundation of how your organization learns in real time.

CHAPTER 3

Recognizing the Need for a New or Upgraded Historian

Most organizations do not realize their historian has become a problem until it is already holding them back.

Performance issues, integration headaches, or slow queries are visible symptoms. The real issue is deeper. The historian quietly defines how fast your enterprise can learn and adapt.

Over time, even the most reliable systems age out of relevance. Technology evolves, business needs change, and what once worked effortlessly begins to resist progress. Recognizing the signs early can save years of rework and millions in hidden costs.

This chapter will help you know when your historian has stopped serving your future and started anchoring you to your past.

When Legacy Becomes Liability

At first, legacy systems feel safe. They are proven, familiar, and trusted. They have been running for years without incident. That is exactly why they are dangerous.

The longer a legacy historian runs, the harder it becomes to modernize around it. Data accumulates. Integrations multiply. Custom scripts grow into invisible dependencies. Over time, that sense of safety turns into fragility.

It is not a single failure that hurts you. It is the slow accumulation of friction. Every upgrade requires a workaround. Every new initiative takes longer than planned. Every integration depends on people who remember how the old system was built.

Eventually, you realize the historian has become a bottleneck. You cannot scale analytics, deploy cloud integrations, or enable real-time insight without tripping over its limitations.

By then, you are no longer deciding whether to modernize. You are deciding how much risk to take while doing it.

The Technical Signals

There are clear technical indicators that a historian is reaching the end of its useful life. These are not just performance quirks. They are symptoms of structural limits.

1. END-OF-LIFE OR UNSUPPORTED VERSIONS

When the vendor roadmap moves on, security patches stop and compatibility breaks. Unsupported systems expose you to unnecessary operational and cybersecurity risk.

2. POOR INTEGRATION CAPABILITY

Legacy historians often rely on proprietary protocols or outdated APIs. Connecting to MES, CMMS, ERP, or cloud platforms becomes a constant engineering project.

3. SLOW QUERY PERFORMANCE UNDER LOAD

As data volumes grow, query times expand exponentially. Engineers wait minutes for insights that should appear in seconds.

4. LIMITED SCALABILITY

Older systems cannot easily scale across multiple sites or handle modern tag volumes. Expanding your historian footprint means replicating effort rather than extending capability.

5. LACK OF STANDARDIZED CONTEXT

Without consistent naming conventions or asset frameworks, each site becomes its own language. Enterprise reporting becomes translation work instead of insight work.

Each of these issues on its own is manageable. Together, they create an invisible drag on every improvement project.



The Operational Signals

Technical limits eventually show up in operations. The connection is subtle at first. **Over time, it becomes impossible to ignore.**

- **Operators** stop trusting dashboards because numbers do not match their experience.
- **Engineers** maintain their own side databases to fill gaps in the historian.
- **Reliability teams** struggle to align asset performance metrics across plants.
- **Energy and emissions reporting** relies on spreadsheets instead of automated data feeds.
- **IT and OT** spend more time reconciling discrepancies than interpreting results.

These are not small frustrations. They are signs that data trust has eroded. When people cannot rely on the historian, they begin building workarounds. And every workaround creates another shadow system that fragments the truth.

The Business Signals

The historian's health is directly linked to business agility. If you look closely, the business will tell you when the historian is falling behind.

- **Digital transformation programs** slow down because data pipelines are unreliable.
- **Compliance reporting** takes longer each year, increasing audit risk.
- **Predictive maintenance and AI projects** stall because the data foundation is inconsistent.
- **Costs** rise quietly as teams spend more time maintaining manual processes.

In short, your people start solving the same data problems in different ways. That duplication is not inefficiency. It is a symptom of architectural misalignment.

The Risk of Waiting

Every month spent on an outdated historian increases both technical and financial debt. The longer you wait, the more intertwined your processes become with legacy constraints.

By the time an incident forces change, modernization becomes a crisis instead of a strategy. The upgrade happens on someone else's timeline, often after a failure or compliance gap.

Proactive organizations treat historian modernization like asset maintenance. They monitor performance, track dependencies, and plan replacements before failures occur. Waiting until it breaks is like running a pump until it seizes. You will pay for downtime and damage that could have been avoided.

The Human Element

Technology alone does not decide when it is time to evolve. **People do.** The historian is often owned by teams that take pride in keeping systems running. Their expertise keeps plants safe and stable, so replacing a historian can feel like erasing part of their history.

Acknowledging that sentiment is important. A modernization effort succeeds only when the people who maintain the historian believe in the future state. Involving them early, showing respect for their knowledge, and framing the change as an evolution rather than a replacement builds trust and momentum.

CHANGE IS EASIER WHEN IT FEELS LIKE PROGRESS RATHER THAN LOSS.



The Opportunity Hidden Inside the Problem

Replacing or upgrading a historian is not just about fixing what is broken. It is about enabling what comes next.

A modern historian allows you to:

- **Create** a single, trusted source of truth across sites and systems
- **Enable** real-time analytics and cross-functional collaboration
- **Reduce** manual reporting effort and improve compliance accuracy
- **Prepare** your architecture for AI and machine learning
- **Strengthen** security and governance while improving accessibility

When you view modernization through this lens, the project becomes a catalyst rather than a cost. It becomes the foundation for strategic growth.

How Dexcent Views the Inflection Point

At Dexcent, we often meet clients when they reach this inflection point. They know their historian is no longer enough, but they are unsure where to begin.

Our approach starts with a diagnostic conversation, not a sales pitch. We help teams map where their data lives, how it flows, and where it breaks down. We look at both the technology and the culture that surrounds it.

Most importantly, we help clarify the difference between an upgrade and a transformation. An upgrade replaces technology. A transformation redesigns how your organization learns from its data.

The Turning Point

If you recognize yourself in any of these scenarios, the right time to act is now. Modernization is not a switch to flip. It is a journey that takes planning, alignment, and design. The earlier you start, the more options you have and the less disruption you face.

The next chapter will help you build the framework for that decision. It will show you how to bring the right people into the conversation, set success criteria, and evaluate platforms with confidence.

Your historian may have reached its limits, but your organization has not. Recognizing that difference is the first step toward progress.

CHAPTER 4

Defining the Evaluation Framework



Once you recognize the need to modernize your historian, the next question is how to choose the right one.

Most organizations rush to feature comparisons or vendor demos, hoping to find a technical match. That approach **almost always backfires**.

A historian is not just a database or a software license. It is a long-term relationship that will shape how your people work, how your data flows, and how your operations evolve. Selecting one requires a structured evaluation process that balances business outcomes, technical performance, and organizational readiness.

The goal of this framework is **to help you make that decision intentionally and defensibly**.



Why a Framework Matters

When the evaluation process lacks structure, every team brings its own priorities.

- **OT** focuses on reliability and uptime.
- **IT** looks for security, scalability, and supportability.
- **Leadership** cares about cost, risk, and value.

Without alignment, the conversation turns into a negotiation instead of a decision.

A well-designed framework removes emotion and personal preference from the equation. It creates a shared language for how decisions are made. It also allows you to compare vendors consistently and justify your final choice with clarity.

Most importantly, it builds trust among stakeholders. People support what they help create, and a transparent process is the simplest way to turn skepticism into buy-in.

START WITH STRATEGY, NOT SOFTWARE

The answer defines everything that follows. If your historian is meant to be an enterprise data hub, your evaluation criteria will look different than if it is serving as a local operational historian for a few facilities.

At Dexcent, we often help teams map these intentions to our three-phase approach:

STRATEGIZE, TRANSFORM, AND EVOLVE.

STRATEGIZE:

Define the outcomes that matter most. Are you aiming to improve reliability, enhance analytics, or standardize data governance across sites?

TRANSFORM:

Identify what needs to change in your technology and your processes to reach those outcomes.

EVOLVE:

Plan how the historian will continue to grow in value as new capabilities such as AI, predictive analytics, and automation emerge.

When your strategy is clear, **your requirements become purposeful rather than reactive.**



Assemble the Right Team

Historian selection is not an engineering task. It is a cross-functional initiative that must include representation from every group affected by data.

A balanced evaluation team usually includes:

- **OT engineering** and controls to validate real-time performance and data acquisition
- **IT architecture and data management** to assess scalability, infrastructure, and cloud compatibility
- **Cyber Security** to ensure alignment with organizational standards and risk posture
- **Operations management** to evaluate usability and impact on workflows
- **Reliability and maintenance** to focus on asset and performance insights
- **Data analytics and data science** to ensure the historian supports advanced analytics and modelling
- **Finance or procurement** to validate cost structures, licensing, and ROI assumptions

Each member brings a unique lens. The framework's job is to align those perspectives into a coherent scoring mode



Gather Requirements the Right Way

Most requirement lists start with features. That may not be sufficient. Start instead with use cases.

A use case describes a real-world scenario that the historian must support. For example:

- **An operator** reviewing performance trends before a maintenance window.
- **A reliability engineer** comparing similar assets across sites to identify anomalies.
- **An executive** viewing energy efficiency trends across facilities.

Once you have those scenarios, identify what technical and functional capabilities make them possible. This method ensures that your requirements connect directly to business value rather than just technical interest.

When gathering requirements, involve end users early. **Their insight will expose practical issues that documentation alone cannot reveal.**

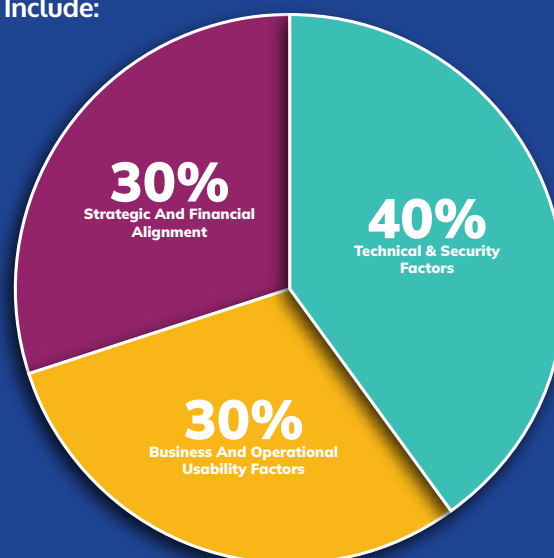
Balance Technical and Business Weighting

A common failure point in historian selection is letting one side dominate the scoring. If IT controls the process, technical elegance wins over usability. If OT leads, immediate functionality wins over long-term scalability.

The most effective evaluations strike a balance. They weigh each category according to its impact on outcomes.

The exact weights will vary, but the key principle is consistency. Decide on the percentages before scoring begins, not after.

A Typical Structure Might Include:



Set Success Criteria You Can Measure

To keep the process objective, define success metrics that can be tested. Examples include:

- **Query performance** under expected load
- **Tag ingestion rate and data fidelity** during simulated network loss
- **Integration success** with key systems such as MES or analytics platforms
- **User satisfaction scores** from pilot participants
- **Uptime targets** and **recovery time objectives**

These criteria should be specific, measurable, and relevant to your operations. Avoid vague statements like **"system must be user-friendly."** Instead, define what user-friendly means in measurable terms, such as the number of steps, interface consistency, or task completion time.

Align with the Enterprise Strategy

A historian does not exist in isolation. It must fit within your organization's broader digital architecture.

Ensure that the evaluation framework aligns with your **enterprise data strategy, governance standards, and cloud policies**. If your organization is moving toward centralized data lakes or hybrid environments, your historian must **integrate seamlessly rather than compete with them**.

This is also the stage to **confirm compliance with industry standards such as IEC 62443 or NIST**. **Cybersecurity and data governance are not add-ons. They are foundational.**

Document and Communicate

Transparency builds credibility. Document how decisions are made, who is responsible for each step, and what criteria define success. Share updates with stakeholders regularly so that everyone understands the rationale behind the evaluation.

A structured and transparent process also helps during executive reviews. Decision-makers can see that the choice was deliberate and data-driven, **not influenced by vendor relationships or anecdotal preference.**

How Dexcent Supports This Process

When organizations engage Dexcent, we do not start by recommending products. We start by helping them build this framework.

Our role is to facilitate workshops that **align technical teams and business leaders around shared objectives.** We map data flows, identify integration points, and clarify the operational use cases that matter most.

By the time you begin comparing platforms, your team knows exactly what success looks like. That clarity prevents the costly cycle of pilot fatigue and rework that plagues many digital projects.



From Consensus to Confidence

The purpose of an evaluation framework is not to please everyone. It is to make a confident, defensible decision that aligns with your mission. When the right people are involved and the process is transparent, even those whose preferences do not win will still support the outcome.

CLARITY CREATES MOMENTUM.
MOMENTUM CREATES ADOPTION.
ADOPTION CREATES VALUE.

Your historian selection journey should feel structured, predictable, and purposeful. **That begins with a strong framework.**

CHAPTER 5

Key Evaluation Categories

**EVERY ORGANIZATION EVALUATING A HISTORIAN
EVENTUALLY ASKS THE SAME QUESTION:**

WHAT MATTERS MOST?

The answer depends on your goals, but experience shows that a handful of categories consistently determine long-term success.

These are not just technical checkboxes. They are the dimensions that define how well your historian will support reliability, performance, and insight across the enterprise.

When you evaluate, look beyond the features. Focus on how each capability contributes **to trust, scalability, and clarity of data.**



1. Data Acquisition and Connectivity

The first question is whether your historian can see the world accurately.

Data acquisition is the heartbeat of the system. A single weak connection or unsupported protocol can compromise the integrity of everything downstream.

When evaluating connectivity, verify:

- **Supported protocols** such as OPC UA, MQTT, and Modbus
- **Native drivers** for your PLC, DCS, and SCADA infrastructure
- **Edge buffering** or **store-and-forward capability** to prevent data loss
- **Tag management processes** and **namespace standards**

Ask each vendor to demonstrate a simulated network loss and recovery. If the historian can resume data flow without manual intervention or missing points, it passes the first test.

A strong historian does not just connect to your systems. It respects them.

2. Data Storage and Scalability

Once your data arrives, the next challenge is where and how it lives.

Historian storage is not simply about capacity. It is about performance, compression, and retention. You are not just archiving numbers; you are preserving knowledge.

Evaluate:

- **Time-series database performance** at scale
- **Compression algorithms** and how they affect fidelity
- **Archiving and retrieval times** for multi-year datasets
- **Options for horizontal and vertical scaling**, both on premises and in the cloud

Ask vendors to show how query performance behaves at your expected data volume. If retrieval times grow exponentially with scale, you are buying future pain.



**A GOOD HISTORIAN STORES EFFICIENTLY.
A GREAT ONE SCALES EFFORTLESSLY.**



3. Data Integrity

Ensuring data integrity is essential to maintaining the trustworthiness and long-term value of any historian. When data is inaccurate, incomplete, or inconsistent, every downstream decision from maintenance planning to compliance reporting is affected. True modernization requires more than secure storage. It requires preserving accuracy and meaning throughout the entire data lifecycle.

When evaluating historians, organizations should look beyond raw storage capacity and consider how effectively each platform maintains the integrity of time-series data from acquisition through to analysis. The following criteria help distinguish systems that are built for reliability from those that simply store information.

KEY EVALUATION CRITERIA

HANDLING OUT-OF-ORDER DATA

Industrial data rarely arrives perfectly sequenced. Network delays, buffering, or edge synchronization issues can cause events to reach the historian at the wrong time. The system should be able to detect, log, and reorder late-arriving data without overwriting valid records or distorting time-based relationships.

MEASUREMENT UNITS AND STANDARDIZATION

Meaningful analysis depends on consistent measurement. A capable historian enforces unit standards, supports automatic conversions, and flags discrepancies as data is ingested. These features prevent errors in trend analysis and KPI reporting that may result from inconsistent units.

DATA VALIDATION AND ERROR DETECTION

Reliable historians include configurable validation rules that check incoming values against expected ranges, formats, and types. They automatically log anomalies, alert users when data falls outside defined thresholds, and allow for structured review before information is moved into long-term storage.

TIMESTAMP ACCURACY AND SYNCHRONIZATION

Accurate time alignment is critical for correlating events across distributed systems. A robust historian should synchronize with trusted time sources, account for latency, and preserve high-resolution timestamps. The ability to manage time zone differences and maintain consistency across sites ensures the integrity of multi-plant analytics.

DATA CORRECTION AND AUDIT TRAILS

Even the most disciplined operations encounter data that must be corrected. A trustworthy historian allows authorized edits while maintaining detailed audit trails that capture who made the change, when, and why. These controls are vital for compliance, traceability, and maintaining confidence in historical records.

HANDLING MISSING OR DUPLICATE RECORDS

The historian should automatically detect gaps and duplicates within datasets. Whether through interpolation, exclusion, or manual review, it must provide configurable options to manage these conditions appropriately without compromising accuracy.

DATA RETENTION AND PURGING POLICIES

Long-term value depends on balancing retention with governance. Evaluate how the historian manages archiving, enforces retention schedules, and preserves metadata when purging data. Proper design ensures compliance and prevents unintentional loss while maintaining storage efficiency.

EVALUATION QUESTIONS

- How does the historian detect and resolve out-of-order or late-arriving data?
- What controls ensure consistent use of measurement units and conversions?
- Are there built-in validation and anomaly detection tools?
- How does the system maintain timestamp accuracy across distributed sources?
- What is the process for data correction, and how are audit trails maintained?
- How does the platform identify and address missing or duplicate records?
- What policies govern data retention, archiving, and purging?

WHY IT MATTERS

Data integrity underpins every layer of digital transformation. Without it, even advanced analytics and machine learning models produce misleading results. A historian that safeguards the accuracy, context, and lineage of data ensures that insights are both timely and trustworthy.

Integrating data integrity practices into your historian selection process protects the foundation on which your enterprise intelligence is built. It allows your organization to **strategize with confidence**, **transform data into decisions**, and **evolve toward a future** where information is reliable, consistent, and actionable.

4. Security and Compliance

Security is not optional. It is a core feature.

Your historian sits at the intersection of IT and OT. That makes it a target and a responsibility.

VERIFY:

- **Encryption** in transit and at rest
- **Integration** with corporate identity management and multifactor authentication
- **Role-based access control** that can differentiate between read and write permissions
- **Audit trails** that record who did what and when
- **Compliance** with standards such as IEC 62443 and NIST

Ask to see how quickly roles can be added, modified, and revoked. If that process is manual or inconsistent, it will become a future vulnerability.

A secure historian is one that allows access confidently rather than restricts it out of fear.



5. Migration

Moving from an existing historian to a new platform should protect business continuity and the value of your historical context. Treat migration readiness as a core evaluation factor, not a late-stage risk to be handled during implementation.

Evaluate:

- **Historical data migration:** Tools and methods for importing time-series history at scale. Mapping of tags and metadata, handling of gaps and duplicates, and options for cleansing and reformatting so data aligns with new models and naming conventions.
- **Interfaces and collectors:** Compatibility with current data collectors, OPC servers, MQTT bridges, and custom interfaces. The ability to replace or wrap legacy connectors without long outages.
- **Dashboards and reports:** Effort to replicate or rebuild existing views. Availability of export or conversion utilities that shorten rebuild time and preserve user familiarity.
- **Integrations and data pipelines:** Impact on current pipelines to MES, ERP, CMMS, APM, BI, and data platforms. Support for a phased cutover that keeps both old and new paths active during transition.
- **Dependent applications:** Identification of apps that consume historian data and validation that APIs, queries, and data formats remain stable or are easily adapted.
- **Validation and reconciliation:** Built-in tools to compare source and target datasets, verify counts and ranges, and produce reconciliation reports for audit.
- **Cutover strategy and rollback:** Support for parallel run, site-by-site sequencing, and a tested rollback plan that avoids extended downtime.
- **Migration tooling and services:** Availability and maturity of vendor utilities, accelerators, and partner expertise that reduce effort and risk.

Ask vendors to demonstrate:

- **Import of a representative historical dataset, including late-arriving and out-of-order records, with a reconciliation report that proves fidelity.**
- **Reconnection of one existing interface and one analytics workflow without code-heavy rework.**
- **A phased cutover plan that keeps a dependent application running while data moves to the new historian.**

A historian that simplifies migration shortens time to value, reduces risk, and preserves trust in your data from day one.

6. Integration

Integration determines how easily your historian can participate in the digital ecosystem.

Modern organizations need their historians to exchange data with MES, ERP, CMMS, APM, BI, and data science platforms. Each of those systems expects data in specific formats and with consistent context.

Evaluate:

- Available APIs and standard connectors
- Support for batch, event, and streaming data
- How asset models and event frames align with other systems
- The ease of integrating with both OT and IT networks

Ask vendors to demonstrate a full pipeline from data collection to visualization in one of your analytics tools. The goal is to see how the historian behaves when it is part of a living ecosystem rather than an isolated server.

A historian that integrates easily becomes a multiplier for every other system you own.

7. Analytics and Visualization

A historian's ultimate value is in how it helps people understand operations.

Analytics and visualization turn raw data into actionable knowledge. Even if advanced analytics will eventually happen in another platform, the historian should provide solid native capabilities.

Evaluate:

- Native trending and dashboard tools for operations and engineering
- Integration with Python, R, or cloud analytics environments
- Support for calculated tags and event frames
- Tools for correlation, forecasting, and anomaly detection

Ask each vendor to build a real-world dashboard using your sample data. Observe how long it takes to configure and how easily your users can modify it.

The best historians make insight accessible to everyone, not just data scientists.

8. Cloud and Hybrid Capabilities

The future of industrial data is hybrid. Some data will always live close to the plant for performance and security. Other workloads will move to the cloud for scalability and analytics.

A modern historian must operate comfortably in and between both worlds.

Evaluate:

- Support for on-premises, cloud, and hybrid deployment models
- Bandwidth management and data latency
- Replication and disaster recovery across regions or sites
- Licensing and cost models that align with hybrid usage

Ask vendors to explain how their architecture handles failover between local and cloud environments. Look for flexibility, not rigidity.

Hybrid capability is not about being everywhere. It is about being ready for wherever your strategy goes next.

9. High Availability and Disaster Recovery

Availability is non-negotiable. If your historian stops, your visibility stops with it.

Evaluate:

- Redundancy and hot standby configurations
- Replication methods and synchronization intervals
- Backup and restore procedures with realistic recovery times
- Documented recovery point and recovery time objectives

Ask vendors to run a failover test live during a demonstration. Real confidence comes from seeing how a system behaves under pressure, not just reading about it in documentation.

A historian earns trust by proving resilience before it is needed.

10. Total Cost and Return on Investment

Price alone is misleading. The true measure is total cost of ownership and the value returned over time.

Consider:

- **Licensing structure and how it scales with sites, tags, or users**
- **Infrastructure and maintenance costs**
- **Support agreements and training expenses**
- **Projected efficiency gains and downtime reduction**

Ask vendors to provide a five-year cost model based on your actual scale and usage. Then compare not only the total number but also the risk and flexibility embedded in each option.

A historian is not an expense. It is an investment in the intelligence of your operations.



11. Vendor Stability and Roadmap

The historian market changes quickly. Mergers, acquisitions, and shifting priorities can affect support and product direction.

Investigate:

- **Company stability and R&D investment**
- **Product roadmap transparency**
- **Frequency of updates and backward compatibility**
- **Size and engagement of the user community**

Ask each vendor to share how they handle legacy customers after major releases. Continuity matters as much as innovation.

You are not just buying software. You are choosing a long-term partner in how your organization manages data.

12. Usability and Administration

Technology that is powerful but difficult to use rarely delivers value. The historian should simplify work, not add complexity.

Evaluate:

- Administrative interface and ability to manage tags in bulk
- Monitoring and alerting tools for system health
- Automation options for routine maintenance
- User experience for both administrators and everyday consumers of data
- Ease of patching and upgrading

Ask vendors to let your team perform a few real administrative tasks during the demo. If simple actions require excessive steps, adoption will suffer.

**THE BEST TECHNOLOGY FADES INTO THE BACKGROUND
BECAUSE IT SIMPLY WORKS.**

Putting It All Together

These categories are not isolated. They reinforce each other. Strong integration enhances analytics. Good security supports compliance. Scalability underpins every other outcome.

When you evaluate, look for balance. A historian that excels in one area but falters in another will eventually cost you more in workarounds and rework.

Use these categories as the backbone of your scorecard. Each will carry a different weight depending on your priorities, but together they give you a holistic view of capability and risk.

How Dexcent Helps

Dexcent often supports clients in building evaluation scorecards based on these categories. We help define measurable criteria, design demonstration scripts, and document results in ways that withstand scrutiny.

Our role is not to choose for you. It is to make sure you choose with clarity and confidence.

CHAPTER 6

Building the Shortlist



AFTER DEFINING YOUR EVALUATION FRAMEWORK AND KNOWING WHAT TRULY MATTERS, IT IS TIME TO BUILD YOUR SHORTLIST.

This is the moment when strategy meets reality. Vendors will present, marketing materials will flood your inbox, and every product will claim to solve every problem.

Without discipline, the process can quickly turn into noise. A clear, evidence-based approach will help you stay focused on fit rather than flash.

The goal is not to find the most popular solution on the market. It is to find the one that fits your operational reality, integrates with your ecosystem, and supports your long-term goals.

Why the Shortlist Matters

Your shortlist defines where you will invest your time, attention, and credibility. Each vendor on that list will consume weeks of demos, testing, and internal discussion. Too many options lead to fatigue and confusion. Too few can cause bias or missed opportunities.

Three to four vendors is usually the sweet spot. It creates variety without overwhelming your team. Each should meet the minimum technical and business criteria from your evaluation framework. If a vendor cannot meet those thresholds, they should not be on the list, no matter how strong their reputation is.

THE PURPOSE OF THE SHORTLIST IS TO CONCENTRATE YOUR EVALUATION ENERGY WHERE IT COUNTS.



Start by Eliminating, Not Adding

Most teams begin their vendor search by adding names to a long list. A more effective strategy is to start by eliminating poor fits.

Remove any product that:

- Does not align with your deployment model, whether on-premises, cloud, or hybrid
- Lacks essential connectivity to your existing control systems
- Is approaching the end-of-life or has uncertain roadmap visibility
- Cannot demonstrate compliance with your security and governance requirements

This first pass should be quick and decisive. The goal is to protect your evaluation team's time. Every hour spent on a non-viable option is an hour not spent testing a real contender.

Engage Stakeholders Before Demos Begin

A historian's selection process often fails before the first demo starts. The reason is misalignment.

Before you schedule presentations, bring your core team together and revisit your success criteria. Confirm what each stakeholder group values most and how they will measure it. Document the weights and definitions.

When each person understands their role and the broader purpose of the selection, they evaluate more consistently. This alignment also prevents last-minute objections that can derail the process later.

Standardize the Playing Field

The key to fair evaluation is consistency. Every vendor should be tested under the same conditions, using the same data, and judged against the same criteria.

Prepare a structured demonstration script and a shared dataset that reflects your real operating environment. Include representative tag counts, realistic network conditions, and integration requirements.

- Ask each vendor to demonstrate how their historian handles:
- Data ingestion and buffering under network disruption
- Integration with at least one analytics or BI tool
- Role-based security setup and audit logging
- Query performance at both plant and enterprise scales

A consistent test environment eliminates excuses and reveals true performance differences.

Watch for Red Flags During Demos

Demos are designed to impress, but they can also reveal what vendors would prefer you not to see.

Watch for:

- **Answers** that rely on future roadmap promises instead of current capabilities
- **Excessive** use of custom code or scripts to complete basic tasks
- **Avoidance** of performance demonstrations under realistic load
- **Resistance** to discussing integration with third-party systems
- **Overreliance** on preconfigured demo data that hides real complexity

A vendor who welcomes tough questions is showing confidence. One who deflects them is showing risk.

Remember, your goal is not to catch anyone off guard but to validate readiness for your specific use case.

Score Objectively

After each demo, capture scores and feedback immediately while impressions are fresh. Use your predefined weighting system to calculate an overall ranking.

Encourage each team member to justify their scores in writing, focusing on evidence rather than opinion. If possible, use an external facilitator or advisor to compile and normalize results.

When everyone knows that scoring will be transparent, evaluations become more thoughtful and less influenced by personal preference.

The result is a clear, data-driven ranking that can be defended in executive reviews.

Balance Evidence and Intuition

While data and scoring are critical, do not ignore your team's instincts. People who have implemented or operated historians before often sense potential problems that numbers cannot capture.

Listen to those insights but require them to be expressed as specific concerns that can be tested. For example, "The interface feels slow" can be translated into a measurable test of response time or workflow steps.

INTUITION SHOULD START THE CONVERSATION, NOT END IT.





Avoid the Comfort Trap

Many organizations gravitate toward vendors they already know. Familiarity feels safe, but it can limit innovation.

Reputation does not equal fit. The vendor that dominates your industry may not align with your specific architecture or governance model. Conversely, a smaller vendor with modern architecture and strong support may deliver greater long-term value.

Choosing the familiar can protect you in the short term but cost you in flexibility over time. The right choice is the one that **fits your vision, not your habits**.

Communicate Transparently

Once your shortlist is finalized, communicate the rationale clearly to both internal stakeholders and the vendors involved. Explain the criteria, timelines, and expectations. **Transparency builds credibility and professionalism.**

It also signals to vendors that the process is structured and fair. Vendors who see rigour in your process will invest their best resources in earning your business.



How Dexcent Supports the Shortlist Phase

Dexcent often helps organizations navigate this phase by facilitating structured workshops and coordinating vendor demonstrations.

We provide guidance on how to design demonstration scenarios, what questions to ask, and how to evaluate answers objectively. Our goal is not to influence which vendor you choose but to ensure the process itself produces confidence and clarity.

A structured shortlist is more than a list of options. It is a statement of intent that your organization is ready to make data-driven decisions about its future.

The Outcome You Should Expect

When this stage is complete, your team should have:

1. A shortlist of three or four vendors that meet all baseline criteria
2. A clear and documented scoring system based on your evaluation framework
3. Alignment among stakeholders on what success looks like
4. A plan for a realistic Proof of Concept that will test the finalists under real conditions

You are now ready to move from discussion to demonstration, where you will see what each system can actually deliver.

CHAPTER 7

Proof of Concept Design

A PROOF OF CONCEPT, OR POC, IS WHERE THE HISTORIAN SELECTION PROCESS MOVES FROM THEORY TO REALITY.

It is the moment when promises meet performance. Unfortunately, many organizations treat the PoC as a formality instead of the pivotal stage that determines long-term success.

A weak PoC creates false confidence. It can make a mediocre solution look capable because the test conditions are too narrow or too ideal. A strong PoC, by contrast, exposes how a historian behaves under real-world pressure. It helps you see not just what works, but what will continue to work once the system is scaled, stressed, and integrated.

The Purpose of the PoC

The PoC exists to answer one question: Will this historian perform in our world, not just in theirs?

A vendor demonstration shows potential. A PoC shows truth.

It is designed to simulate reality, to reveal both technical and operational behaviour. The goal is not to make the vendor fail. The goal is to give your organization confidence that success in the pilot will translate to success in production.

If the PoC cannot replicate real performance, integration, and reliability scenarios, it is not worth running.



Build the Right Environment

Your PoC should reflect your actual architecture and constraints as closely as possible. Testing in a synthetic or simplified environment might make the process faster, but it hides the challenges that matter most.

Include representative elements such as:

- Real tag structures and naming conventions
- Authentic network conditions, including latency and occasional connectivity loss
- Integration points with at least one analytics or business system
- Actual user roles such as operators, engineers, and administrators
- The more realistic the environment, the more meaningful your findings will be.

Avoid over-engineering the setup but resist the temptation to simplify it too much. A PoC that is too clean will always succeed. The point is to test what happens when conditions are not perfect.

Define Success Before You Begin

Before the first line of data is collected, your evaluation team should agree on what success looks like.

Define objective, measurable outcomes for the historian to achieve during the PoC.

Examples include:

- Consistent ingestion of data at the required rate
- No data loss during simulated network outages
- Query response times within defined thresholds
- Integration success with existing systems
- Ease of user access, administration, and security setup

If success is not defined in advance, every stakeholder will interpret results differently. The conversation will drift from data to opinion, and the final decision will lose credibility.

Include a Stress Test

Real operations are rarely steady. Network interruptions, high query loads, and sudden spikes in data volume are normal. Your PoC should test how each historian handles that variability.

Introduce stress conditions such as:

- Simulated loss of connectivity between the plant and historian
- Multiple users running concurrent queries at high volume
- Rapid expansion of tag counts beyond the initial design
- Failover and recovery between primary and secondary servers

Observe how the historian behaves, how much manual intervention is required, and how quickly it recovers.

**THE BEST SYSTEMS REVEAL THEIR STABILITY
WHEN PUSHED.**



Validate Integration and Context

Integration is where many PoCs fail quietly. A historian might collect and store data perfectly but struggle when it needs to share that data across systems or apply context that makes it usable.

During the PoC, validate that:

- Asset models and naming conventions align across systems
- Event frames or calculations can be replicated consistently
- Data flows cleanly to analytics or visualization platforms
- Role-based permissions work correctly across both OT and IT layers

These steps ensure that the historian not only works technically but also fits the way your organization actually uses data.

Capture User Experience

Numbers matter, but usability determines adoption. A technically perfect system will fail if your teams find it frustrating or time-consuming to operate.

Include representatives from each key user group in the PoC and gather their feedback systematically. **Ask them:**

- How easy was it to navigate and find what you needed?
- How much training would you need to use this daily?
- What felt intuitive, and what felt cumbersome?

Adoption starts with trust, and trust begins with ease of use. A PoC that ignores the human side of the historian is incomplete.

Assess Organization Behavior

A Proof of Concept is more than a technical test. It is also a mirror that reflects how your organization responds to change. Success depends not only on how the historian performs, but on how your people, processes, and systems adapt to it.

A strong PoC should reveal whether your organization is ready to turn data into decisions, scale improvements across sites, and sustain momentum beyond the pilot.

KEY EVALUATION CRITERIA

VALUE REALIZATION

A historian delivers value only when the right people can access, interpret, and act on its insights. During the PoC, confirm that operators, engineers, analysts, and decision-makers can use the data to improve processes and outcomes. Look for tangible examples of decisions influenced by historian data, even in small ways.

SCALING TO PRODUCTION

Moving from pilot to full-scale deployment often exposes technical and organizational gaps. Evaluate what is required to scale effectively. Consider infrastructure readiness, integration with existing systems, and the effort needed to support higher data volumes and user counts.

If migrating from a legacy historian, assess how historical data, interfaces, dashboards, and dependent applications will transition without disrupting business continuity. A well-defined migration and rollback plan prevents avoidable setbacks later.

BUSINESS PROCESS ADAPTATION

The historian may uncover opportunities or inefficiencies that require process change. Identify workflows that need to be redefined, automated, or newly introduced to capture full value. This could include establishing stronger data governance, integrating real-time analytics into daily operations, or standardizing how performance insights are reported.

ORGANIZATIONAL CHANGE MANAGEMENT

Technology adoption thrives on clarity and engagement. Evaluate how your organization communicates purpose, trains users, and builds enthusiasm for change. Define who owns adoption activities, how feedback will be collected, and how early successes will be shared. Change management is not about avoiding resistance; it is about channeling it into learning and improvement.



EVALUATION QUESTIONS

- How will historian insights be used to drive operational or business improvements?
- What technical or cultural barriers might slow the move from pilot to production?
- Which business processes must evolve to sustain value?
- What is the plan for training, communication, and ongoing support?
- How will user feedback be gathered and incorporated into continuous improvement?

WHY IT MATTERS

Organizational readiness determines whether the historian becomes a tool or a transformation. A PoC that measures both technical performance and behavioral response provides a truer picture of success.

By assessing organizational behavior early, you prepare the ground for adoption, reduce friction during rollout, and create a culture where data-driven decision-making becomes second nature.

Assess Vendor Behavior

The PoC is not only a test of technology. It is a test of partnership.

Watch how each vendor behaves during setup, troubleshooting, and analysis.

Do they communicate clearly?

Do they respond quickly to issues?

Are they proactive in identifying risks?

The professionalism and support you see during a PoC are often a preview of the relationship you will have later.

A great vendor treats the PoC as a collaboration. A weak one treats it as a sales obstacle.



Avoid Common PoC Traps

Several pitfalls can undermine the credibility of a PoC. Avoid these:

- **Happy path testing:** Only testing basic functions that are guaranteed to work.
- **Unclear ownership:** No single person is responsible for managing PoC logistics and deliverables.
- **No defined time limits:** Allowing tests to drag on until momentum fades.
- **Vendor-led testing:** Letting vendors dictate what gets tested instead of following your framework.
- **Failure to analyze results:** Completing the PoC without structured scoring or lessons learned.

The purpose of the PoC is to inform a confident decision, not to prolong indecision.



Turn Findings Into Evidence

When the PoC concludes, compile results into a summary report. Include **key metrics**, **user feedback**, and **overall scoring** aligned with your evaluation framework.

Highlight both strengths and weaknesses for each vendor. Be honest and factual. If one system excelled in performance but struggled with administration, document it clearly. Transparency in this stage will make your final recommendation far more credible.

Your final PoC report should read like an engineering analysis, not a sales pitch. It is the evidence your leadership team will rely on to make an informed decision.

How Dexcent Supports This Stage

Dexcent often acts as an independent facilitator during Proof of Concept design and execution. We help define measurable success criteria, simulate real operational conditions, and ensure vendors are tested fairly.

We also help translate technical results into business impact. Our clients use this stage not only to select the right historian but also to build internal confidence for deployment.

By treating the PoC as a true rehearsal for production, organizations dramatically reduce risk and increase adoption success.

From Test to Decision

A well-structured PoC turns uncertainty into evidence. It gives your team the insight and confidence to choose a historian that will stand up to real-world conditions.

When done correctly, the PoC becomes the bridge between evaluation and commitment.

IT TRANSFORMS THEORETICAL COMPARISONS INTO OPERATIONAL TRUTH.

CHAPTER 8

Building the Business Case



A STRONG TECHNICAL EVALUATION WILL NOT GET FAR WITHOUT A CLEAR BUSINESS CASE.

The historian might be the backbone of your operations, but to secure funding, executive sponsors need to understand how it impacts the bottom line, not just the data pipeline.

The goal of the business case is simple: translate operational outcomes into business outcomes. Show how the historian drives reliability, efficiency, and risk reduction in measurable terms.

WHEN YOU SPEAK IN THE LANGUAGE OF VALUE, DECISION-MAKERS LISTEN.

From Technical Need to Strategic Investment

Executives rarely make decisions about databases or protocols. They make decisions about risk, cost, and performance.

That is why every business case should answer three questions:

- 1. What is the cost of staying as we are?**
- 2. What is the value of making the change?**
- 3. What is the risk of getting it wrong?**

Each answer must be backed by evidence gathered during your evaluation and Proof of Concept.

The historian project should not be positioned as a technology upgrade. It should be positioned as a strategic enabler for the organization's transformation.



Define the Cost of the Current State

Start by showing the impact of your current historian's limitations. Numbers speak louder than frustrations.

Quantify the cost of:

- **Downtime** caused by slow or unreliable data visibility
- **Manual reporting effort** across sites and teams
- **Redundant storage and maintenance** of siloed systems
- **Lost opportunities** due to delayed insights or inaccurate information
- **Security and compliance risks** linked to outdated software

When possible, translate these inefficiencies into monetary terms. For example, hours of manual work multiplied by labor cost, or production delays multiplied by cost per hour of downtime.

This creates a baseline that gives your stakeholders a tangible sense of the current pain.

Quantify the Value of Change

Next, outline the measurable benefits of implementing a modern historian.

Value can take many forms:

- **Operational performance:** Faster root cause analysis, improved uptime, and reduced maintenance costs.
- **Efficiency:** Automated reporting and fewer manual interventions.
- **Compliance:** Easier audits and better documentation for safety and environmental performance.
- **Sustainability:** More accurate tracking of energy consumption and emissions.
- **Innovation:** Data readiness for AI, advanced analytics, and future initiatives.

Attach numbers wherever possible. Even conservative estimates are better than none. If your PoC showed a 30 percent reduction in query time, estimate the productivity impact of that improvement across all users.

**EXECUTIVES WILL NOT EXPECT PRECISION,
BUT THEY WILL EXPECT LOGIC.**



Show How the Investment Pays Back

Every major technology project competes for funding. A clear payback model makes yours stand out.

Structure your analysis in three parts:

1. **Investment:** Total cost of ownership over five years, including licenses, infrastructure, support, and training.
2. **Return:** Quantified benefits in reduced downtime, labour savings, and performance gains.
3. **Payback period:** The time it takes for the investment to offset its cost.

Even if the payback period is several years, highlight the cumulative impact over the system's lifetime. Historians are long-term assets that generate ongoing efficiency and reliability benefits.

When you position the historian as an enduring capability rather than a short-term project, the financial narrative becomes stronger.

Address Risk Head-On

Every executive knows that risk comes with change. Your business case gains credibility when you address it openly.

Identify potential risks such as:

- Migration challenges or data conversion errors
- Integration complexity across multiple systems
- Temporary performance impact during transition
- Adoption resistance from users
- Vendor dependency or roadmap uncertainty

For each, present a mitigation strategy. Reference findings from your PoC to show that risks were tested and quantified.



**WHEN LEADERS SEE THAT RISK IS BEING MANAGED
RATHER THAN IGNORED, CONFIDENCE RISES.**

Align the Message with Corporate Goals

Executives are motivated by outcomes that support the company's strategic direction. Frame your case in that context. If the organization is pursuing digital transformation, emphasize how the historian is the foundation for that evolution. If sustainability or ESG reporting is a priority, show how improved data quality enables accurate metrics and regulatory compliance. If operational excellence is a key initiative, highlight reliability improvements and predictive maintenance capabilities.

In every case, connect historian modernization directly to the organization's mission. Make it clear that this investment moves the company toward its most important objectives.

Tell the Story Clearly

The most persuasive business cases tell a story that is easy to follow.

1.THE PROBLEM: "Our existing historian limits visibility, slows analytics, and exposes us to risk."

2.THE IMPACT: "These limitations cause X dollars in lost productivity or compliance risk each year."

3.THE SOLUTION: "A modern historian provides real-time visibility, context-rich data, and a secure foundation for digital initiatives."

4.THE PROOF: "Our PoC demonstrated measurable improvements in performance and reliability."

5.THE RESULT: "This investment will deliver a return within X years and position us for scalable growth."

Keep it concise and focused. Use visuals, charts, and short summaries for each section.

Executives have limited time. A well-structured story that can be explained in five minutes will do more for your cause than a fifty-page technical appendix.



Prepare for Questions

A well-prepared presenter anticipates skepticism. Common questions include:

- What happens if we do nothing?
- What happens if the project is delayed or goes over budget?
- How will we measure success in the first year?
- What is the total cost to operate this system across all sites?
- How will this investment interact with other digital initiatives?

Answer these questions before they are asked. Include contingency plans and post-implementation metrics.

**WHEN EXECUTIVES SEE PREPARATION,
THEY SEE LEADERSHIP.**



How Dexcent Supports Business Case Development

Dexcent often helps organizations translate technical performance into business value.

Our consultants work with both technical and financial stakeholders to quantify benefits, validate assumptions, and structure a clear narrative for approval. We bring real-world benchmarks from similar industries so that projections feel grounded and realistic.

We also help teams articulate non-financial value such as safety, compliance, and operational resilience, which are often overlooked but critical to long-term success.

Make the Decision Inevitable

A great business case does not push for a decision. It makes the decision feel inevitable. It connects the technical truth from your PoC to the strategic ambitions of your organization.

By the time executives finish reading, they should see that doing nothing is the riskiest option of all.

**WHEN YOUR BUSINESS CASE ACHIEVES THAT CLARITY,
YOU ARE READY TO MOVE FORWARD WITH CONFIDENCE.**

CHAPTER 9

Selecting the Winner and Contracting Without Regret

AFTER THE PROOF OF CONCEPT AND BUSINESS CASE ARE COMPLETE, THE FINAL STEP IS TO MAKE YOUR CHOICE.

By now, you have the data, the experience, and the insights needed to decide. Yet this is the stage where many organizations hesitate.

Why? Because the weight of a long-term decision can create fear of making the wrong one. The historian you choose will live at the heart of your operations for years, influencing every digital initiative that follows.

The solution is not more analysis. It is clarity.

**WHEN YOU FOLLOW A DISCIPLINED PROCESS,
THE RIGHT DECISION BECOMES SELF-EVIDENT.**

Move from Comparison to Commitment

Once your team has scored each vendor based on your evaluation framework and Proof of Concept results, review the findings together.

Look for patterns in the data. Which solution consistently performed best across technical, operational, and strategic dimensions? Which vendor demonstrated both capability and partnership?

If you find yourself stuck between close scores, focus on what matters most to your future state. Ask three questions:

1. Which historian best aligns with our long-term architecture?
2. Which vendor will be the most reliable partner during implementation and beyond?
3. Which solution inspires confidence among those who will use and maintain it daily?

The answers will reveal your direction.

**CONFIDENCE GROWS
FROM EVIDENCE AND CONSENSUS,
NOT FROM PERFECT INFORMATION.**

Create a Decision Package

Executives need a concise, transparent summary of the decision process. This is not just a formality. It is your opportunity to show that the recommendation is grounded in logic, collaboration, and evidence.

A strong decision package includes:

- **A one-page executive summary** describing the outcome and rationale
- **Weighted scorecards** from the evaluation and Proof of Concept
- **A summary** of benefits, costs, and projected ROI
- **Identified risks** with mitigation plans
- **Implementation phases** and support model

This package demonstrates due diligence and positions your team as methodical and accountable. It also protects the decision from being questioned later when leadership changes or priorities shift.

Communicate the Why

Every selection decision creates winners and losers inside an organization. Some people may have favoured a different vendor. To prevent resentment or doubt, communicate the reasons behind the final choice clearly and consistently.

- **Focus on the facts that matter most.**
- **The chosen solution performed better in the scenarios that align with our strategy.**
- **It offers lower long-term risk due to stability, scalability, or support.**
- **It provides the clearest path to achieving our business outcomes.**

When people understand the reasoning, they are more likely to support the decision, even if their preferred vendor did not win.

Negotiate the Contract with Clarity

Contracting is not about squeezing vendors for every possible concession. It is about establishing a foundation for partnership.

Approach negotiations with the same transparency that guided your evaluation. Both sides should leave the table clear on expectations and responsibilities.

Key points to verify include:

- **Licensing terms** and how they scale with growth
- **Service-level agreements** for uptime, support response, and issue escalation
- **Ownership and access** to your data
- **Training, documentation, and post-implementation support**
- **Exit clauses** and **data portability** in case future migration is needed

**A WELL-STRUCTURED CONTRACT PROTECTS BOTH PARTIES
AND PREVENTS FUTURE MISUNDERSTANDINGS.**

Plan for Governance and Oversight

Once the contract is signed, many teams shift their attention to implementation and forget about long-term governance. This is a mistake.

Establish a steering committee or governance team to oversee the historian's performance, support structure, and roadmap alignment. This group should include representatives from OT, IT, and business leadership.

Regularly review:

- **System uptime and reliability metrics**
- **Change management and version control**
- **Security posture and compliance**
- **Integration success with new systems and analytics tools**

Governance ensures the historian remains a living, evolving part of your enterprise, not a static system that drifts into neglect.



Set the Relationship Up for Success

A great contract outlines expectations. A great partnership exceeds them.

During early implementation, pay attention to how the vendor engages. Are they proactive in communication? Do they provide insight beyond the scope of the project? Do they show genuine commitment to your outcomes?

These early signals often forecast the quality of the long-term relationship.

Vendors that view success through your eyes become trusted allies. Those who focus solely on scope and deliverables will struggle to adapt as your needs evolve.



Partnering with System Integrators

In many cases, the vendor that provides your historian will not be the one implementing it. Most rely on system integrators who specialize in configuration, integration, and deployment. These partners turn software into a working solution that fits the reality of your operations.

Choosing the right integrator is just as important as choosing the right historian. Implementation quality determines whether your system performs as promised or struggles from the start.

Evaluate your implementation partner on several fronts:

- **Experience with your chosen historian:** Look for integrators with proven success deploying the same platform in similar industries. Ask for reference projects that match your scale and complexity.
- **Operational understanding:** A strong integrator understands both technology and process. They can translate your operational needs into practical configuration choices that make data meaningful from day one.
- **Collaboration and communication:** The best integrators act as an extension of your team. They share information transparently, coordinate with IT and OT stakeholders, and escalate issues early rather than quietly working around them.
- **Governance alignment:** Ensure the integrator follows your organization's security, compliance, and change management policies. Implementation shortcuts that ignore governance will create problems later.
- **Training and knowledge transfer:** Your integrator should leave your internal teams stronger and more capable, not dependent. Confirm that training, documentation, and handover are built into the scope.

Ask to meet the implementation team, not just the sales lead. The individuals on-site will define your daily experience and the quality of the final outcome.

A skilled system integrator makes the difference between installation and transformation. They connect your historian's technical capabilities to the realities of your people, systems, and workflows.



Document Lessons Learned

Every selection process teaches valuable lessons about your organization's culture, priorities, and processes. Take time to reflect and document them.

Ask your team:

- What worked well in our evaluation process?
- Where did we struggle or lose momentum?
- What would we do differently next time?

Capturing these insights will make future technology decisions faster and more effective. It will also help institutionalize knowledge that might otherwise be lost when team members move on.

Celebrate the Decision

Finally, recognize the effort that went into this process. A successful historian selection requires coordination, expertise, and patience.

Take a moment to acknowledge the achievement and communicate the decision broadly. Share the strategic significance of what comes next. This project is not just about technology. It is about building the foundation for how your organization will use data to drive progress and innovation.

**A CLEAR, PUBLIC MILESTONE ENERGIZES THE TEAM
AND SIGNALS TO THE ORGANIZATION THAT CHANGE IS UNDERWAY.**



How Dexcent Supports This Phase

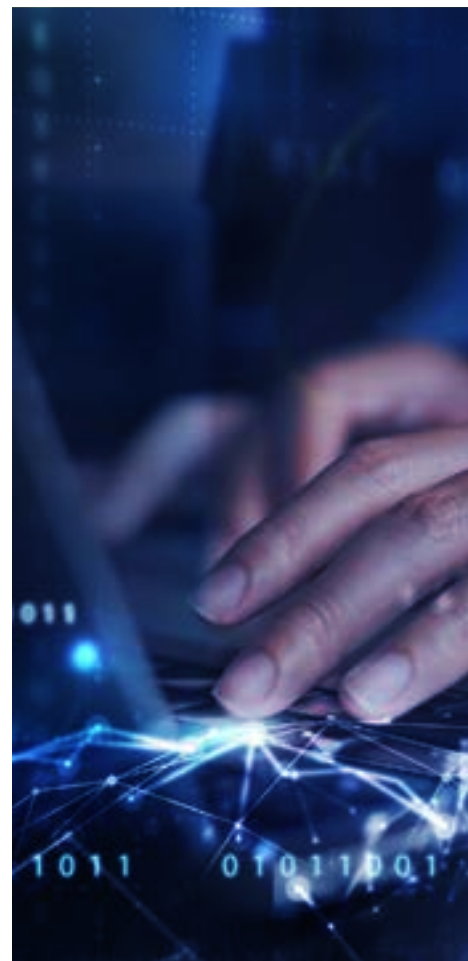
Dexcent often helps organizations navigate final selection and contracting by providing independent guidance on technical validation, commercial terms, and vendor accountability.

We help clients translate evaluation data into clear decision reports and provide templates for contract terms that align with best practices. We also assist in establishing governance structures to sustain success long after implementation.

Beyond selection, Dexcent plays an active role in implementation. As a system integrator, we work closely with clients to configure, deploy, and integrate the historian within real operational environments. Our teams ensure that the technology aligns with process requirements, that data flows cleanly across systems, and that internal teams gain the confidence to manage and evolve the platform over time.

Because Dexcent understands both the strategic and technical dimensions of historian modernization, we help clients move smoothly from decision to execution — reducing risk, accelerating adoption, and ensuring that the historian performs as intended in production.

Our goal is simple: help you make a confident, defensible decision and turn that decision into lasting operational value.



The Outcome You Should Expect

At the end of this stage, your organization should have:

1. **A fully justified selection decision supported by data and consensus**
2. **A signed contract that reflects both immediate and long-term needs**
3. **A governance model that ensures accountability and continuous improvement**

This is where the historian journey transitions from selection to transformation. The next chapter will focus on avoiding common pitfalls and sustaining momentum once implementation begins.

CHAPTER 10

Common Pitfalls and How to Avoid Them

EVEN THE BEST-DESIGNED HISTORIAN PROJECTS CAN STUMBLE.

Success depends as much on execution and mindset as on technology. Over the years, we have seen the same mistakes repeat across industries. The good news is that every one of them can be avoided with foresight and discipline.

This chapter identifies the most common pitfalls and offers practical strategies to stay clear of them. Treat it as a checklist for project planning and long-term stewardship.

PITFALL 1:

Underestimating Total Cost of Ownership

Organizations often focus on initial licensing or implementation costs while ignoring the hidden expenses that accumulate later. These include infrastructure upgrades, storage expansion, network capacity, support renewals, and staff training.

A historian is a living system that grows with your operations. Budget for its lifecycle, not just its launch.

HOW TO AVOID IT:

Develop a five-year financial model that includes recurring costs, expansion needs, and internal resource effort. Review it annually. If you plan growth, assume your data volume will double faster than expected.

Financial transparency at the start prevents difficult conversations later.

PITFALL 2:

Choosing Reputation Over Fit

Many organizations select vendors based on brand familiarity rather than contextual fit. A globally recognized solution might not align with your architecture, security policies, or operational requirements.

A big name does not guarantee the best outcome.

HOW TO AVOID IT:

Evaluate every option against the same objective framework. Let evidence guide you, not marketing. The best solution is the one that meets your specific needs, scales with your environment, and supports your people.

**PITFALL 3:****Leaving Out End Users**

It is easy to treat historian selection as a technical exercise, handled by engineers and IT teams. Yet the people who will rely on it daily—operators, analysts, and reliability engineers—are often the ones least consulted.

If those users find the system cumbersome, adoption will stall, and the value of your investment will diminish.

HOW TO AVOID IT:

Include end users in every phase of the process. Let them participate in demonstrations, testing, and feedback sessions. Their insights will expose usability issues before they become operational problems.

A historian only succeeds when the people who depend on it trust and enjoy using it.

PITFALL 4:**Ignoring Migration Complexity**

Migrating from one historian to another is not as simple as copying files or transferring tags. It involves remapping data models, verifying historical accuracy, aligning naming conventions, and ensuring that integrations remain intact.

Rushing this process can create inconsistencies that undermine confidence in the new system.

HOW TO AVOID IT:

Conduct a migration readiness assessment before the project begins. Inventory all existing data sources, scripts, and dependencies. Define a clear cutover strategy and test it in a controlled environment.

Never assume that data will migrate perfectly without validation.



PITFALL 5:

Treating Security as an Afterthought

Security is often considered late in the project, just before deployment. At that point, changes are costly and disruptive.

Because the historian connects both OT and IT networks, it becomes a critical point of exposure if not designed securely from the start.

HOW TO AVOID IT:

Integrate Cyber Security requirements into every stage of the design. Involve your security team early to align on access control, authentication, encryption, and audit logging.

A secure historian does not slow you down. It builds confidence to share and use data across the enterprise safely.

PITFALL 6:

Failing to Plan for Change Management

Technology adoption is never just about technology. It changes workflows, responsibilities, and even identities. If those shifts are not managed with empathy and communication, resistance will rise and momentum will fade.

HOW TO AVOID IT:

Create a structured change management plan that includes training, support, and communication milestones. Identify champions within each department who can advocate for the new system.

Celebrate early wins and communicate progress often. Engagement is the difference between compliance and commitment.



PITFALL 7:

Neglecting Data Governance

A historian without governance quickly becomes another data swamp. Without clear rules for naming conventions, context modelling, and access permissions, accuracy erodes, and trust collapses.

HOW TO AVOID IT:

Establish a data governance framework before deployment. Define who owns data quality, how changes are approved, and how standards are maintained across sites.

Governance is not bureaucracy. It is the foundation of reliability.

PITFALL 8:

Treating the Project as “Finished” at Go-Live

Many organizations treat go-live as the finish line. In reality, it is the starting point for continuous improvement.

If you do not plan for ongoing optimization, training, and updates, the historian will slowly drift out of alignment with evolving business needs.

HOW TO AVOID IT:

Plan a sustainment phase that includes scheduled reviews, performance tuning, and roadmap updates. Allocate budget for ongoing training so that new employees learn how to use the system effectively.

A historian that evolves with your operations will continue to deliver value long after deployment.



PITFALL 9:

Isolating the Historian from Broader Strategy

A historian project often starts as a technical initiative, but its success ultimately depends on how well it aligns with corporate goals.

When teams fail to connect historian modernization to digital transformation, reliability, or sustainability objectives, executive support weakens over time.

HOW TO AVOID IT:

Reinforce the link between historian outcomes and organizational strategy. Measure success not only by system performance but also by business impact, such as faster decision-making, reduced downtime, or improved reporting accuracy.

When the historian contributes visibly to strategic outcomes, it earns ongoing investment and attention.

PITFALL 10:

Losing Momentum After Selection

The period between vendor selection and implementation is often when enthusiasm fades. Competing priorities arise, and projects stall before contracts are executed.

HOW TO AVOID IT:

Assign a dedicated project owner with authority to maintain momentum. Keep stakeholders informed of progress and next steps. Schedule kick-off activities immediately after signing the contract.

Momentum is fragile. Protect it through communication and accountability.



How Dexcent Helps Organizations Avoid These Mistakes

Dexcent has guided industrial organizations through historical modernization for decades. We have seen where projects succeed and where they stall. Our consultants bring structure, discipline, and practical insight to help you avoid these pitfalls from day one.

We help clients design roadmaps that anticipate risks, align stakeholders, and build resilience into every phase of transformation. Our approach ensures that your historian becomes an accelerator for performance, not another technical burden.

From Awareness to Action

leadership. When you plan for these challenges in advance, you create a smoother path to adoption and a faster time to value.

Each lesson here is an opportunity to strengthen your implementation before it begins.

CHAPTER 11

Future Trends to Plan For

TECHNOLOGY DOES NOT STAND STILL, AND NEITHER SHOULD YOUR HISTORIAN STRATEGY.

The role of the historian is expanding from data storage to data intelligence. What once served engineers is now serving data scientists, executives, and even automated decision systems.

To stay competitive, your historian must not only meet today's needs but also adapt to what comes next. The following trends are already reshaping how industrial organizations capture, manage, and use their data..

1. The Rise of Edge Computing

Technology adoption is never just about technology. It changes workflows, responsibilities, and even identities. If those shifts are not managed with empathy and communication, resistance will rise and momentum will fade.

WHAT TO DO NOW:

Create a structured change management plan that includes training, support, and communication milestones. Identify champions within each department who can advocate for the new system.

Celebrate early wins and communicate progress often. Engagement is the difference between compliance and commitment.



2. Historian as a Service

The idea of running historians exclusively on physical servers is fading. More organizations are adopting subscription-based or hybrid models known as Historian as a Service.

In this model, infrastructure, updates, and maintenance are managed by the provider, allowing internal teams to focus on data use rather than system upkeep. It also allows elastic scaling as data volumes grow.

However, cloud adoption must be paired with robust security and clear data governance. Moving to the cloud does not remove responsibility. It simply shifts the focus from hardware to control and trust.

WHAT TO DO NOW:

Assess your data sovereignty requirements and determine which workloads can safely move to a managed environment. Plan a phased migration strategy that balances performance, cost, and security.

3. Artificial Intelligence and Machine Learning

AI and machine learning thrive on high-quality, contextualized data. The historian is often the first and most critical source.

Historian data enables models for anomaly detection, predictive maintenance, and process optimization. As these capabilities mature, historians are evolving to include built-in analytics and connectors that feed data science workflows directly.

The challenge is not generating insights but ensuring that AI operates on data it can trust. Poor data quality or inconsistent context produces unreliable predictions.

WHAT TO DO NOW:

Treat historian modernization as a foundation for AI readiness. Prioritize data consistency, metadata standards, and asset frameworks. A historian that serves AI well will also serve every other data-driven initiative.

4. The Expansion of Cyber Security Mandates

Industrial environments are under increasing regulatory pressure to protect data and systems. Governments and industries are raising the bar for Cyber Security compliance.

Future historians must include deeper integration with identity management, encryption, and zero-trust network architectures. They must also provide detailed audit capabilities that satisfy both internal and external oversight.

Security will no longer be a feature. It will be a condition of participation in industrial networks.

WHAT TO DO NOW:

Align your historian's security posture with corporate IT standards and evolving regulations. Treat Cyber Security as a continuous improvement program rather than a one-time compliance task.

5. Data Democratization and Collaboration

The historian used to belong primarily to engineers and control system specialists. That is changing rapidly. Data is becoming a shared asset across departments, from maintenance to finance.

This democratization of data requires tools and interfaces that make historian data accessible without compromising integrity or security. Self-service analytics, web-based dashboards, and role-based access are now essential features.

When more people can see and understand operational data, collaboration improves and innovation accelerates.

WHAT TO DO NOW:

Design your historian architecture with cross-functional access in mind. Focus on usability, scalability, and clear governance so that data can empower rather than overwhelm.

6. Integration with Enterprise Data Ecosystems

The historian is no longer an island. It must interact seamlessly with data lakes, cloud analytics platforms, and enterprise resource systems. Integration is becoming the defining characteristic of modern historians.

APIs, streaming connectors, and common data models now play the role that proprietary drivers once did. The historian's value will increasingly depend on how easily it shares data across systems while maintaining accuracy and context.

WHAT TO DO NOW:

Adopt open standards and architectures that minimize lock-in. Ensure your historian strategy complements your broader data management framework. Integration is not an afterthought; it is the pathway to enterprise intelligence.

7. Sustainability and ESG Reporting

Environmental, social, and governance reporting has moved from optional to essential. Accurate measurement of energy use, emissions, and efficiency depends on reliable operational data.

The historian is becoming a critical component of ESG data infrastructure. It provides verifiable, time-stamped records of performance that can stand up to external scrutiny.

WHAT TO DO NOW:

Align historian data models with sustainability metrics and reporting frameworks. Ensure that data retention policies support transparency and traceability.

By integrating ESG considerations into your historian design today, you position your organization to meet tomorrow's expectations with confidence.

8. The Human Transformation

As technology evolves, so must the people who use it. The historian's expanding role demands new skills, from data modeling to analytics interpretation. Engineers, analysts, and operators will need to think differently about data—less as output and more as insight.

Successful organizations invest not only in technology but also in people. Training, collaboration, and culture determine how effectively your historian becomes part of daily decision-making.

WHAT TO DO NOW:

Treat modernization as a learning opportunity. Create internal champions who bridge OT and IT. Encourage cross-functional teams to use historian data in problem-solving and innovation.



How Dexcent Helps Organizations Prepare for the Future

Dexcent partners with industrial organizations to future-proof their historian strategies. We help clients align technology roadmaps with business objectives, integrate modern architectures, and design frameworks for data governance and Cyber Security.

Our focus is to ensure that every decision you make today positions your organization to evolve gracefully tomorrow.

We believe the historian is not just a record of the past but the foundation of a learning enterprise—**one that adapts, improves, and thrives in a data-driven world.**

CHAPTER 12

The Dexcent Approach:

STRATEGIZE, TRANSFORM, **EVOLVE**

BY NOW, IT SHOULD BE CLEAR THAT SELECTING A HISTORIAN IS NOT ONLY A TECHNICAL CHOICE.

It is a strategic decision that shapes how your organization learns, adapts, and grows. The difference between success and frustration often lies in the process you follow.

At Dexcent, we believe modernization must be deliberate, measurable, and aligned with real business outcomes. That belief is embodied in our approach: Strategize, Transform, Evolve.

This framework ensures that technology investments move in step with organizational maturity, creating value at every stage of the journey.

STRATEGIZE: Clarity Before Action

Every successful transformation begins with a shared understanding of what success looks like. Too often, organizations rush to select technology before aligning on outcomes. The result is a patchwork of systems that perform well individually but fail to deliver collective insight.

Dexcent begins by helping you define a clear vision for your historian and its role in your broader data ecosystem.

We work with your teams to:

- **Identify operational and business goals that modernization must support**
- **Map the current state of your data infrastructure and processes**
- **Uncover hidden barriers such as data silos, governance gaps, or misaligned workflows**
- **Build consensus across OT, IT, and leadership on priorities and success metrics**

The output of this stage is not just a technical roadmap. It is a strategic alignment document that connects your historian initiative directly to measurable business objectives.

This clarity allows every decision that follows to be grounded in purpose.



TRANSFORM:

Turning Vision into Reality

Transformation begins when strategy meets execution. This is where Dexcent's technical and operational expertise comes into play.

We guide clients through modernization in a structured, low-risk sequence. Each step is designed to minimize disruption while maximizing adoption and performance.

During the Transform phase, we help you:

- **Clean and normalize data from multiple historians, SCADA, and PLC systems**
- **Design and implement asset frameworks that add context to raw data**
- **Configure your historian for performance, scalability, and security**
- **Integrate with analytics, visualization, and maintenance platforms**
- **Establish governance models that sustain data quality over time**
- **Develop training and adoption programs for end users**

Dexcent's engineers and consultants work side by side with your teams, blending technical execution with operational awareness. Our goal is to build systems that are both robust and intuitive, ensuring they deliver immediate value from the moment they go live.

Transformation is not about replacing old technology with new. It is about building a smarter foundation for how your organization uses data to improve reliability, efficiency, and decision-making.



EVOLVE: Sustaining Value and Continuous Improvement

Modernization is not the end of the journey. It is the beginning of continuous evolution.

As your operations expand, new technologies emerge, and data demands increase, your historian must evolve to keep pace. The most successful organizations treat the historian as a living system that grows alongside their business.

Dexcent helps clients maintain that momentum through:

- **Regular performance reviews and optimization audits**
- **Integration of predictive analytics, anomaly detection, and machine learning tools**
- **Expansion of historian access across departments for cross-functional insight**
- **Ongoing training and change management to support new users and capabilities**
- **Strategic planning to align future upgrades with business growth and digital initiatives**

The Evolve phase ensures that your investment continues to deliver increasing value year after year. Instead of reacting to change, your organization becomes proactive, using data as a guide to anticipate challenges and capture new opportunities.



THE VALUE OF A GUIDED JOURNEY

Many organizations attempt modernization alone and learn how costly trial and error can be. The value of a guided journey lies not only in avoiding mistakes but in accelerating success.

Dexcent brings the structure, experience, and technical depth needed to move from uncertainty to clarity with confidence. Our approach balances engineering rigour with strategic perspective, allowing clients to make bold decisions backed by evidence and insight.

**WE DO NOT SELL SOFTWARE.
WE DELIVER ALIGNMENT, CAPABILITY, AND TRUST.**

A PARTNERSHIP BUILT ON UNDERSTANDING

The strongest partnerships are those rooted in shared accountability. Dexcent works as an extension of your team, focused on helping you achieve your outcomes.

Our consultants are fluent in both OT and IT. We understand the realities of industrial operations and the complexities of digital transformation. That dual perspective allows us to translate between worlds and ensure that every technical decision serves a business purpose.

Clients choose Dexcent not only for what we know, but for how we work. We bring transparency, structure, and integrity to every engagement.



BRINGING IT ALL TOGETHER

The Strategize, Transform, Evolve framework is more than a process. It is a mindset that turns modernization into momentum. It helps organizations move from fragmented data to unified insight, from reactive decisions to predictive intelligence, and from siloed systems to enterprise collaboration.

When applied to historian modernization, it ensures that every dollar invested creates a measurable impact. It connects technology to transformation.

THE INVITATION

If your organization is ready to modernize its historian and build a foundation for continuous improvement, Dexcent is ready to guide you.

We offer consultation sessions where our experts review your current environment, identify opportunities for improvement, and outline a practical path forward. These sessions are not sales meetings. They are strategic conversations designed to give your team clarity and direction.



TALK TO A DEXCENT CONSULTANT TODAY.

Let us help you turn your historian into the engine of your enterprise intelligence.

CHAPTER 13

Conclusion and Next Steps

SELECTING THE RIGHT HISTORIAN FOR YOUR ENTERPRISE IS MORE THAN A TECHNOLOGY DECISION.

It is a strategic inflection point that determines how your organization will use data to drive performance, safety, and innovation.

Throughout this guide, you have explored how to recognize the need for change, how to evaluate with clarity, and how to build alignment across technical and business teams. You have seen how a disciplined approach transforms a complex decision into a confident one.

Now the real work begins.

The Historian as a Strategic Asset

A historian is not just a data repository. It is the operational memory of your enterprise. It captures the experience, the context, and the learning that enable better decisions every day.

When designed and managed intentionally, the historian becomes a catalyst for continuous improvement. It connects departments, unifies data, and empowers your people to act with precision and insight.

This is what separates organizations that react to problems from those that anticipate them.

From Awareness to Action

Reading this guide has given you the knowledge to make informed decisions. Acting on it will turn that knowledge into measurable progress.

- Your next steps are straightforward:
- Convene your evaluation team and review your current historian's capabilities.
- Use the evaluation framework and criteria in this guide to assess readiness.
- Identify gaps that limit scalability, integration, or reliability.
- Develop a modernization plan aligned with your operational and business objectives.
- Schedule a consultation with Dexcent to validate your plan and explore implementation options.

Momentum matters. The sooner you start, the sooner your organization will begin capturing the benefits of a connected, intelligent data foundation.



Turning Data into Decisions

The historian is the heartbeat of digital transformation. It connects the physical and digital worlds, ensuring that every insight, every dashboard, and every improvement initiative rests on accurate and trusted information.

As industries evolve, those who master this connection will lead. They will make faster, more confident decisions because they can see the full picture of their operations in real time.

Your historian is the key to that visibility.

A Continuous Journey

Modernization is not a one-time event. It is a continuous journey of learning, improvement, and evolution. Each milestone builds upon the last. Each success fuels the next opportunity.

With the right foundation, your organization will move from collecting data to creating intelligence, from monitoring performance to predicting outcomes.

Dexcent's Strategize, Transform, Evolve approach was designed for this exact purpose. It ensures your historian remains not just current, but continually valuable.

Your Call to Action

The next move is yours.

Schedule a consultation with Dexcent. Let our experts review your current environment, assess your challenges, and help you define a roadmap that aligns technology with strategy.

You will leave the session with practical recommendations, a clearer vision, and a renewed sense of direction.

Talk to a Dexcent consultant today.

The future of your historian is the future of your enterprise. Make it a foundation that can evolve with you.

FINAL THOUGHT

Data tells the story of your operations. The historian decides whether that story is fragmented or complete.

CHOOSE CLARITY. CHOOSE PROGRESS. CHOOSE TO EVOLVE.