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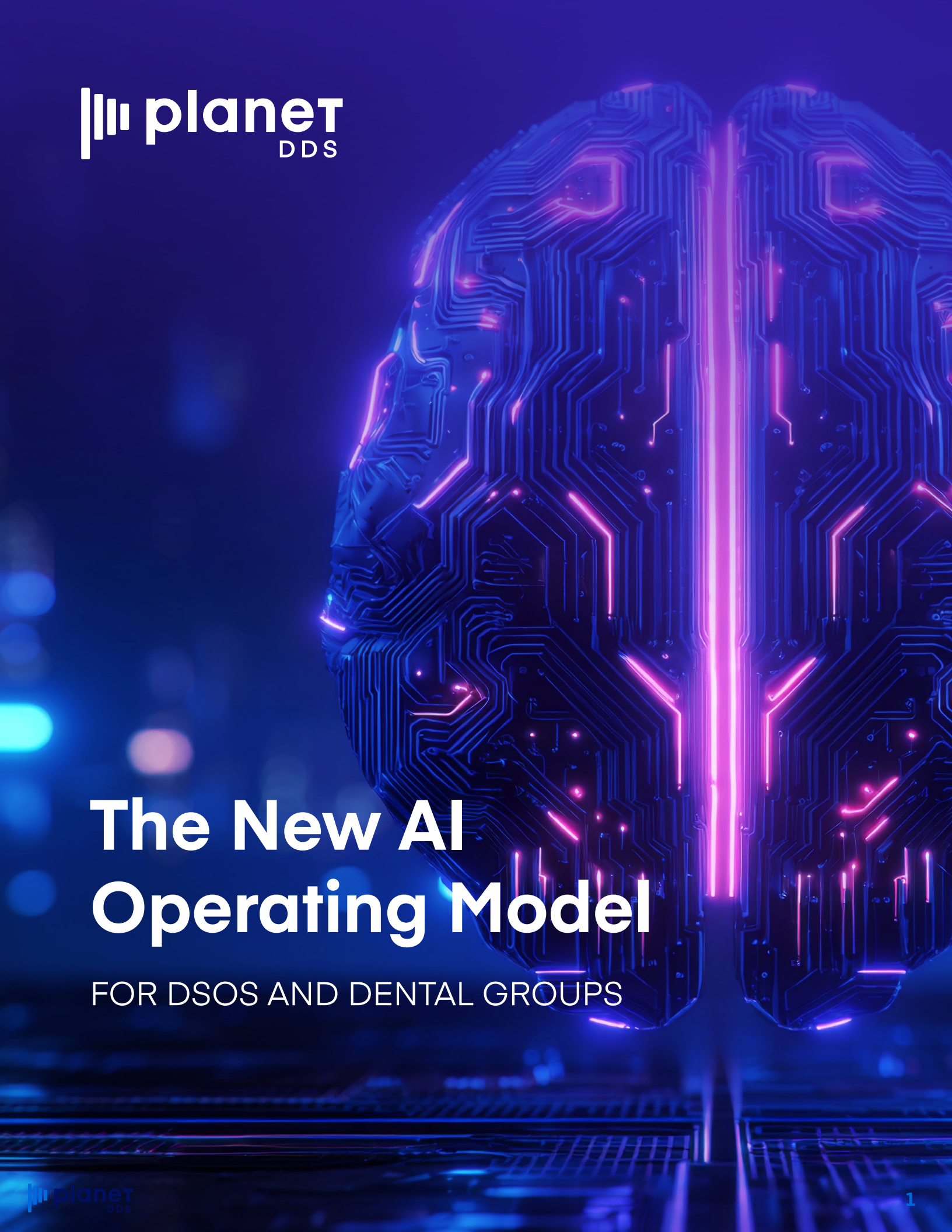

The New AI Operating Model

FOR DSOS AND DENTAL GROUPS

Contents

Dentistry at an Inflection Point

With an estimated market of over $165 billion, dentistry remains one of healthcare's most resilient segments.[1] Demand for preventive and restorative care tends to hold steady, even through economic downturns.

But resilience hasn't meant complete immunity. Staffing shortages, shrinking insurance reimbursements, rising wages, and higher supply costs are now combining to put sustained pressure on margins For dental support organizations (DSOs), the fastest-growing segment of the industry, these challenges are amplified by the complexity of operating at scale.

For private equity investors and operator-owners alike, **EBITDA is the lens through which value is created or destroyed.** When front office turnover slows collections, when insurance complexity eats away at margins, or when patient flow dips due to scheduling inefficiencies, enterprise value is at stake.

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Precedence Research, 2024

Technology has long served as a lever for protecting EBITDA. The industry's most recent major digital transformation, **the shift from server-based practice management to cloud-native platforms,** enabled DSOs to scale faster, gain visibility across multiple locations, and reduce IT overhead.

Today, dentistry faces a new inflection point. Artificial intelligence (AI) is not just another tool or bolt-on feature. It represents the emergence of a **new operating model for the DSO,** one in which intelligence is embedded into workflows, outcomes are predicted before they occur, and autonomous agents handle a growing share of the operational burden. Those who act decisively to deploy the new AI operating model will set the standard for the next decade of dentistry.

Lessons from Other Industries:

What AI Winners Do Differently

Dentistry is not alone in this transformation. Across industries, the leaders pulling ahead with AI are not the ones experimenting with isolated tools. It's those who treat AI as a **strategic operating model shift.**

Research from McKinsey and *Harvard Business Review* shows that companies succeeding with AI do three things differently:

1. **Platform AI vs. point AI**
   They embed AI into workflows rather than layering it on top of them. Instead of dozens of disconnected copilots, they build a platform where intelligence flows seamlessly across the enterprise.

2. **Tie AI to business outcomes**
   AI success is measured in EBITDA protection, growth, and resilience, not in proofs of concept. Winning organizations start with financial key performance indicators (KPIs) and work backward into AI strategy.

3. **Build organizational readiness**
   Governance, talent, and adoption culture matter as much as the models themselves. AI cannot thrive in organizations that lack clear accountability, ethical guardrails, or a workforce trained to use it confidently.

The lesson for DSOs is clear: It's time for AI to move beyond experiments and into full deployment. To deliver enterprise value, it must be embedded into the very operating model of the business.

Dentistry's Unique AI Opportunity

Dentistry is uniquely suited for AI transformation, for two reasons:

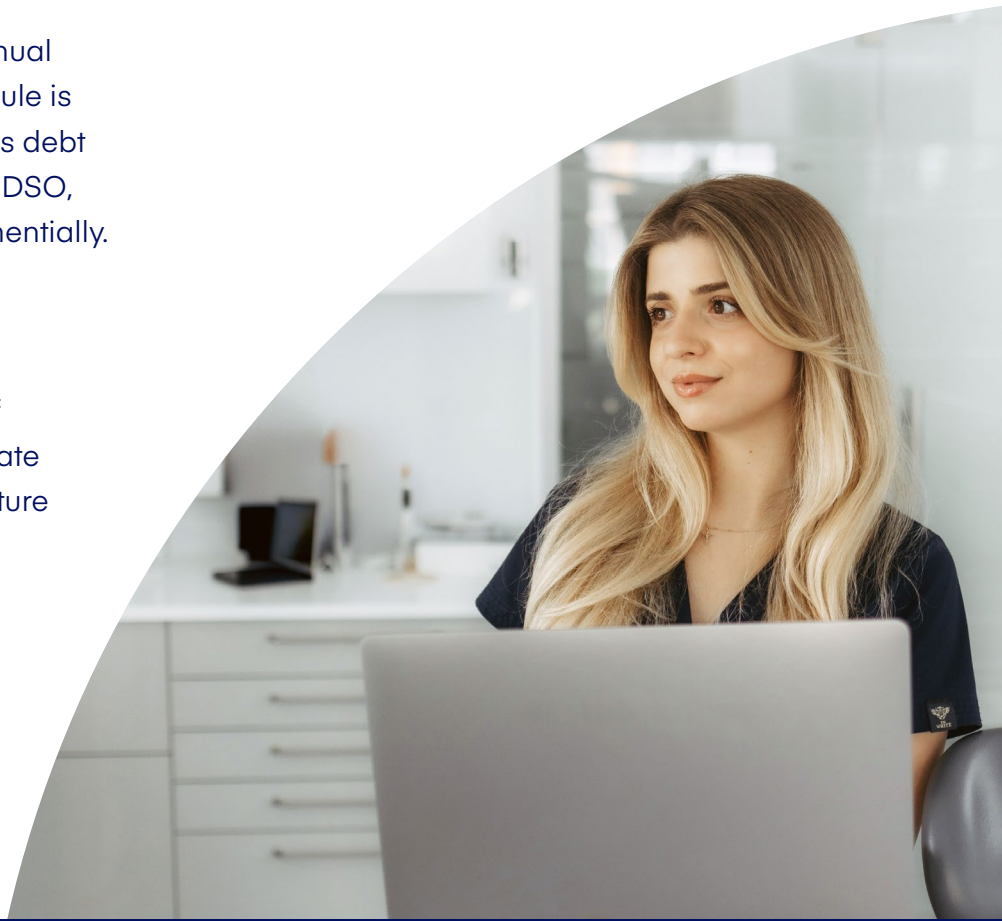
1. **The industry is plagued by fragmented legacy systems.**
Each disconnected practice management system (PMS), imaging tool, or revenue cycle management (RCM) platform adds to what might be called "process debt," when antiquated, disconnected workflows and systems block DSOs from realizing AI's true potential.

   Every time a claim requires manual follow-up or a hygienist's schedule is rebuilt from scratch, that process debt compounds. In a multi-location DSO, the complexity magnifies exponentially.

2. **Dentistry has an underutilized data advantage.**
Dentistry has a treasure trove of underutilized data. DSOs generate millions of claims annually, capture extensive clinical imagery, and track detailed patient journeys from intake to treatment.

Historically, much of this data has remained siloed and underleveraged. AI has the potential to unlock this trove of information and convert it into cross-functional value: **clinical, operational, and financial.**

Where other industries struggle with scarce proprietary data, DSOs already sit on rich datasets. The competitive opportunity lies in activating it. The organizations that unify, clean, and harness their data through AI will build an advantage that compounds with every patient interaction.



The Maturity Path:

AI Assistance to AI Acting Autonomously

AI adoption in dentistry will not be a single leap but a staged maturity journey. Leaders should expect to progress through three phases:

STAGE 1	**Assist.** AI automates repetitive manual tasks: claim attachments, eligibility checks, and patient reminders, reducing staff workload and error rates.
STAGE 2	**Advise.** AI delivers predictive insights: identifying at-risk patients, forecasting production, and advising executives on regional performance variances.
STAGE 3	**Act**. AI agents execute autonomously, orchestrating workflows across systems to reschedule patients in real-time, follow up on unpaid claims, or dynamically adjust staffing models.

By sequencing adoption in this way, DSOs can manage risk responsibly, build workforce trust, and generate incremental ROI that supports further investment.

The AI Workforce Model in Dentistry

The prevailing metaphor of a single "AI copilot" undersells the opportunity. DSOs do not need a single assistant. They need a **workforce of agents,** each specializing in different tasks but working together as an orchestrated mesh.

Those include:

- **Scheduling agents** fill gaps, reduce no-shows, and balance chair utilization.
- **RCM agents** automate what used to be manual in the revenue cycle process including eligibility checks, claim submissions, payment posting, and collections.
- **Communication agents** manage conversations with patients via SMS, email, and web chat.
- **Marketing agents** run targeted outreach and reputation management campaigns.
- **Quality assurance agents** monitor output to ensure reliability and accuracy.

For a 100-location DSO, even marginal gains produce significant value. Consider RCM with 2.9% of production typically lost to inaccurate insurance estimates. At scale, that equates to **$30 to $50 million annually.** AI can recapture this value by automating eligibility and follow-up.

The shift is not about replacing staff with AI but about **re-architecting processes.** Humans remain central. **AI takes on the drudgery,** enabling teams to focus on patient care, case acceptance, and growth.

The Economic Impact of AI in Dentistry

The financial case for AI in dentistry is compelling and increasingly quantifiable:

$15 billion

is lost across U.S. dental practices per year due to claim denials, documentation misses, and other revenue cycle inefficiencies.

Videa, 2024

RCM gains

On average, 2.9% of production is lost to inaccurate insurance estimates. For every $1 million in production, that's nearly $30,000 wasted chasing unpaid claims. AI-driven eligibility checks, claims automation, and follow-up agents can reduce this leakage significantly. For a 50- to 100-location DSO, best-in-class RCM powered by AI could deliver millions in incremental collection. An estimated $15 billion is lost across U.S. dental practices per year due to claim denials, documentation misses, and other revenue cycle inefficiencies.[2]

Labor arbitrage and staffing relief

Talent remains the top EBITDA constraint. Three out of five practices are worried about staff recruitment and retention.[3] Agentic AI creates a new form of labor arbitrage, automating repetitive work at a fraction of the cost of human FTEs, protecting margins without scaling headcount.

3 out of 5 practices

are worried about staff recruitment and retention.

ADA.org, 2025

Top-line growth
AI can directly support revenue by increasing treatment plan acceptance, expanding specialty offerings, and reactivating patients. Practices using automated reminders are reporting 30 to 40% fewer no-shows.[4]

Practices using automated reminders report

30–40%

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Arini, 2024

Private equity investors already cut valuations by

10–20%

when DSOs operate on fragmented, non-scalable infasctructure.

Boston Consulting Group, 2024

Bottom-line efficiency
Workflow automation reduces overhead costs associated with manual processes such as payment posting, printing statements, and attaching claims. Standardizing on cloud-native platforms also lowers IT costs and removes integration bottlenecks, creating the foundation AI needs to thrive.

Enterprise value
Private equity investors already cut valuations by 10 to 20% when DSOs operate on fragmented, non-scalable infrastructure.[5] AI modernization reverses that discount.

Put simply, AI impacts every lever of the EBITDA equation:

- **Top line**
  Faster collections, higher treatment acceptance, more patient reactivation
- **Bottom line**
  Lower labor costs, reduced write-offs, faster A/R cycles
- **Enterprise value**
  Higher valuations driven by resilience, scalability, and defensibility

The Roadblocks:

What Could Slow Adoption

The path to AI in dentistry is not without challenges.
Four major roadblocks could slow adoption:

1. **Fragmented tech stacks**
   Integration across multiple PMS, imaging, and RCM systems remains a hurdle.

2. **Workforce skepticism**
   Many staff members are wary of "AI hype" and fear displacement.

3. **Data governance and compliance**
   Healthcare settings require strict adherence to privacy, security, and ethical standards.

4. **Ethical and regulatory questions**
   From bias in algorithms to transparency in patient interactions, oversight will be essential.

Leading DSOs will confront these challenges directly by standardizing tech stacks, being transparent about AI's role, investing in training, and setting clear governance frameworks.

Preparing Your DSO for AI Adoption

Implementing AI at your DSO is not about merely adopting a new tool. It is about transforming the enterprise operating model. DSOs that succeed will align technology, workflows, culture, and governance.

The four enablers of AI readiness:

1. **Data and technology:**
   Modernize infrastructure, unify platforms, and ensure secure, high-quality data access.

2. **Workflows and systems:**
   Redesign processes so AI is embedded in daily operations and workflows, not an afterthought.

3. **Talent and culture:**
   Shift from skepticism to collaboration. Staff must view AI as a teammate that reduces drudgery.

4. **Governance and ethics:**
   Establish oversight frameworks to guide responsible, transparent adoption.

Best Practices for DSOs:

- Form an AI governance council spanning clinical, operational, and IT leadership.
- Develop adoption playbooks tied to measurable ROI (A/R days, hygiene recall).
- Invest in training and change management to equip staff for AI collaboration.
- Communicate the “why” clearly: AI empowers teams and improves patient experiences.

DSOs that prepare systematically will not only capture early wins but also build the resilience required to lead the industry’s AI transformation.

The AI Horizon in Dentistry

AI adoption in dentistry will unfold across two horizons:

Near-term (12 to 24 months):

- Early adoption of AI agents in RCM, scheduling, and patient reactivation
- Conversational AI replacing dashboards for executives, answering "What's my production in the Northeast?" in seconds
- Trust-building initiatives to address workforce skepticism
- Clear EBITDA impact tied to early use cases

Mid-term (3 to 5 years):

- Autonomous operations across core workflows, from claims management to patient scheduling
- Leaner staffing models that redeploy human capital toward patient care and growth
- Predictive personalization at the patient level, anticipating needs before they arise
- Always-on compliance and audit readiness, embedded in the platform

DSOs that successfully deploy AI within their organizations will become predictive, proactive, and resilient. Laggards will face declining valuations and increased operational drag.

AI: The Leadership Imperative

Dentistry has reached its next great inflection point. AI is not a passing technology trend; **it is a strategic operating mandate.** Boards, investors, and executives must move beyond experimentation and treat AI adoption as a core lever for protecting EBITDA, unlocking growth, and securing enterprise value.

Powering your DSO with AI still allows you to keep people and patient at the center. Clinicians, staff, and patients remain the heroes of the story. AI simply clears the friction, automates the routine, and amplifies human capacity to focus on what matters most: care, growth, and patient experience.

Where We're Taking AI in Dentistry

DentalOS™ now provides a platform-level AI layer that enables intelligence and agents to operate across applications and integrations. This means DSOs benefit from coordinated, end-to-end automation that spans the entire revenue cycle, imaging, and patient engagement workflows, not just fragmented tasks

That's the foundation of DentalOS with AI, our vision for the industry's first AI-native platform which will deliver:

- **Operational intelligence at scale**
  Every DSO leader knows the pain of flying blind: reporting delayed by weeks, metrics fragmented across systems, and no reliable way to benchmark performance. Operational intelligence can continuously monitor enterprise operations, surfacing anomalies, and benchmarking offices in real-time. Instead of waiting on spreadsheets, executives can see the business's financial and operational pulse instantly.

- **An agentic workforce**
  With an agentic workforce supporting the human workforce, DSOs will gain a dynamic advantage. These agents act like virtual teammates, handling insurance verifications, claims resubmissions, patient reminders, schedule optimization, and more, freeing staff to focus on strategic and patient-facing work.

Our goal is not simply to make DSOs more efficient but to give them a durable operating advantage, one that improves EBITDA today and positions them for resilience and growth tomorrow.

At Planet DDS, we're partnering with forward-thinking organizations to pilot, refine, and scale the next generation of AI capabilities.

If your organization is ready to explore what an AI-native operating model looks like in practice, whether that's accelerating RCM, reactivating patients, or creating board-level visibility into operations, now is the time to start the conversation.

The future of dentistry won't be defined by who has the most tools but by who embeds intelligence into every workflow. That's the future Planet DDS is building.

BOOK A DEMO

Ready to explore AI-driven dentistry?

Contact us today

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Dental software is broken. We aim to fix it. As a partner in growth for DSOs and dental groups, Planet DDS delivers a cloud-based platform designed to scale alongside growing organizations. Powered by DentalOS™ with AI, its open platform includes Denticon Practice Management, Cloud 9 Ortho Practice Management, and Apteryx Cloud Imaging. Trusted by leading DSOs and emerging dental groups nationwide, Planet DDS enables 13,000+ practices and 118,000 users to move beyond outdated legacy software with seamless integrations, optimized workflows, and scalable technology built for growth.