Artificial Cerebellar Intelligence-Based Predictive Maintenance as a Service

Better:

- Loss Mitigating Process Control
- Just-In-Time Maintenance Scheduling

Stratos Perception, LLC.

Advancing industrial autonomy and safety

AI-Based Predictive Maintenance (AI PdM) is saving some money in some places. But, it is shallow and has failed to live up to its promise.

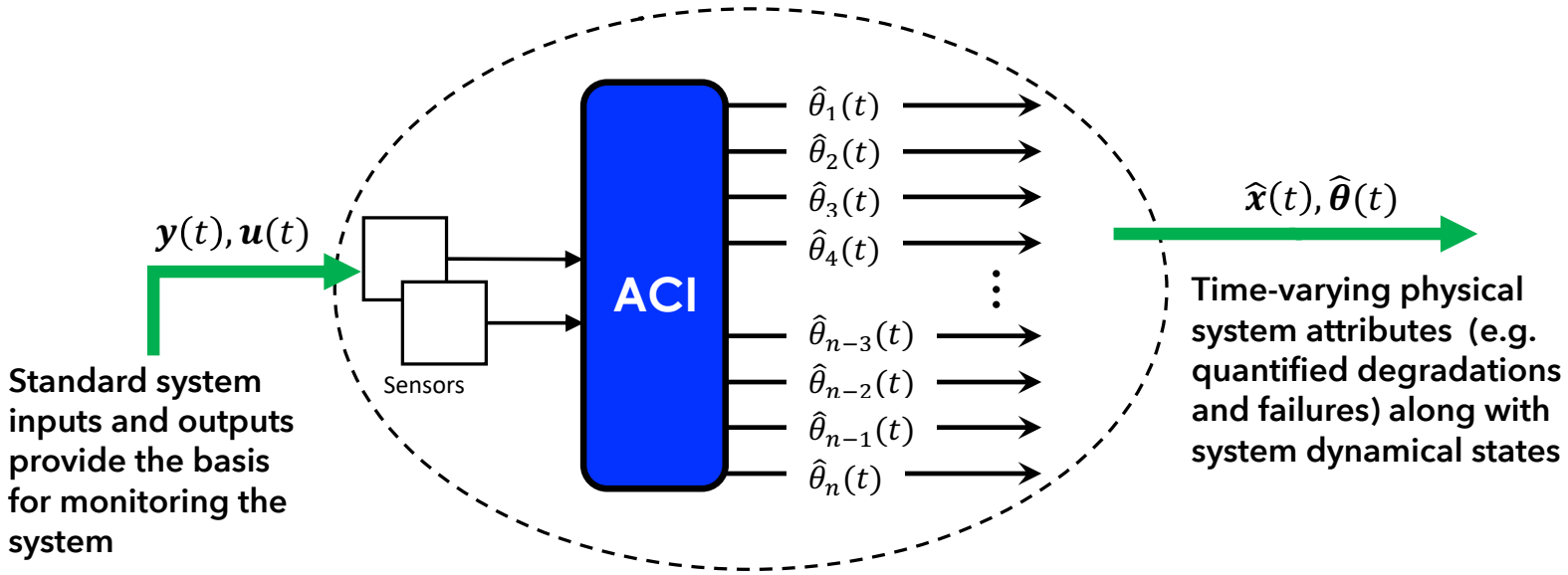
Consequentially, industry continues to suffer billions of dollars in annual losses due to asset-damaging inefficiencies, unplanned down-times, and catastrophes.

Industry needs better AI-PdM

We Invented a Better AI

Artificial Cerebellar Intelligence (ACI)

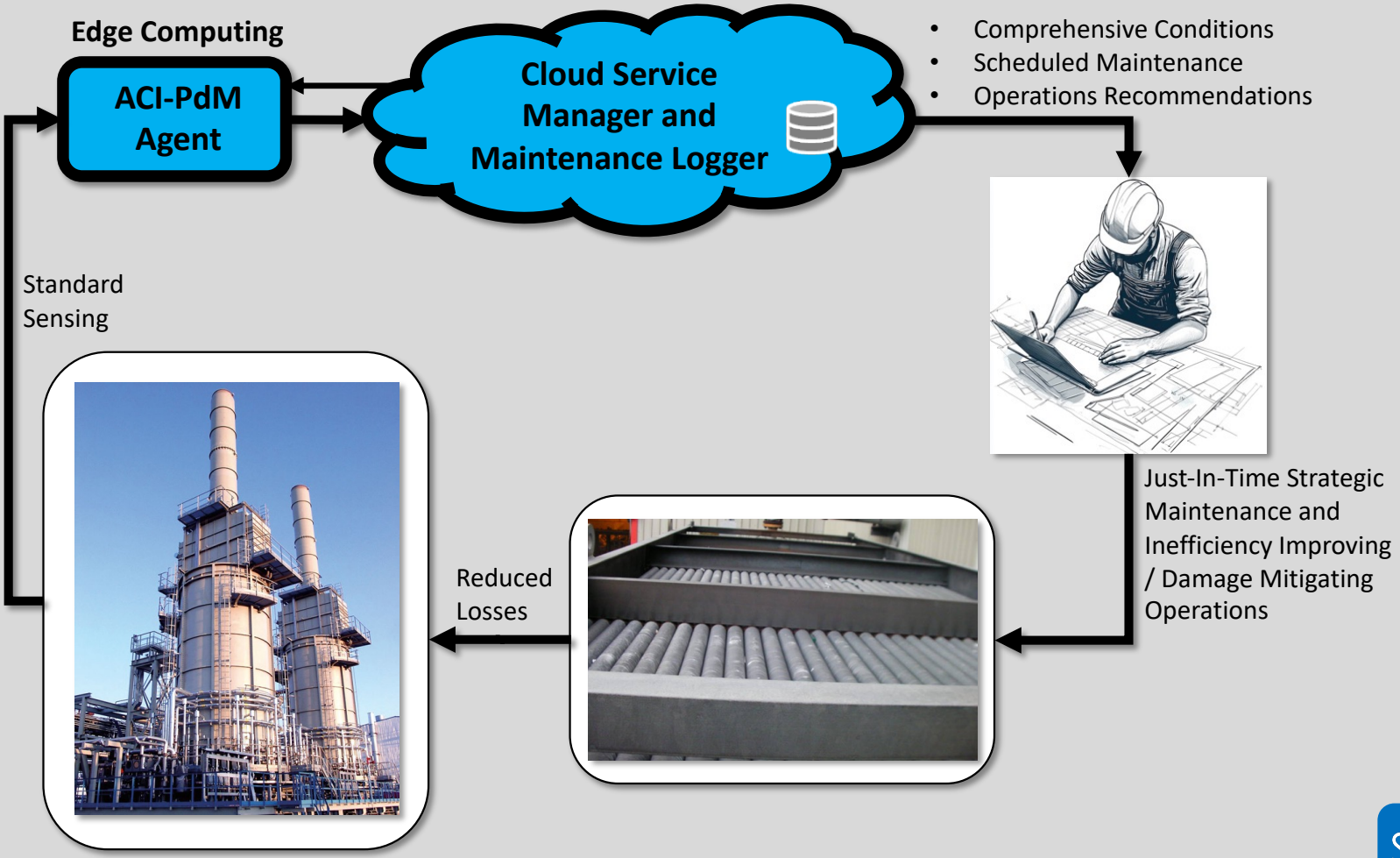
Patented, Ground-Breaking



Turns ordinary sensor signals into a torrent of physical insights

Better AI-PdM

ACI-PdM agent



Advantages

1000x less expensive, because:

- Trained by inexpensive **synthetic data** from engineering software models, instead of actual failure histories of the machine or process, which can cost millions of dollars to generate.

- Utilizes **current sensors**, instead of requiring the addition of new specialized sensors

100x more sensitive, because:

- Can estimate a high number of of independent internal system attributes per output sensor, as opposed to 1-to-1

- **Detects complex and subtle degradation modes**, due to an inherent high degree of freedom.

- Automatically **adapts** to system deviations introduced by maintenance

Scales to Fleet, because:

- Is a general solution that a**pplies the same way to all systems, including legacy systems**

- Can be trained and tested for one machine and then **applied directly to the fleet** of like machines, regardless of implementation differences

Value Pool $70 B

PdM Market Size

Software and Services

Pilot wedge (Year 2)
$38 M

Year 1
$1.5 M

Funnel layer (5-yr)	Scope	2030 run-rate*	Notes
Value Pool	Refinery outages + efficiency drag	**US $70 B / yr**	Economic upside ACI targets
TAM	Global PdM software + integration	**US $14 B / yr**	20 % fee share on savings
SAM	All historian-enabled refineries	**US $5.6 B / yr**	≈40 % adoption by 2030
SOM – Beach-head	20 Gulf-Coast refineries	**US $560 M / yr**	Full-site licences
Pilot wedge (Year 2)	Compressors + heaters at those sites	**US $38 M ARR**	Quick proof → site expansion
Year-1 target	First 3 pilot sites (same equipment)	**≈ US $1.5 M ARR**	Seed-stage revenue milestone

The Competition* has PdM Performance Gaps, Leaving Billions of Dollars of Pain Across Subsectors

Refinery Distillation Towers	
Gap	**Latest data point**
Energy & throughput losses persist.	Crude-train fouling wastes ≈ **US $3.3 billion/yr** globally, ~US $6 million per 200 kbpd U.S. refinery (integratedglobal.com)
Flooding still forces rate cuts.	Industry revamp note calls flooding "a common abnormal condition" that still requires crude-rate reductions today (revamps.com)
Point solutions save $$ but aren't ubiquitous.	A single antifoulant program saved **US $1.5 million/yr** at one Gulf-Coast plant (halliburton.com)—yet most refineries run without such real-time fouling control.
Resulting value left unclaimed: Cost across the 131-site U.S. refinery system is **US $1.0 – 1.4 billion/yr**	

*AspenTech, Emerson Electric, Honeywell, ABB, Senseye, GE Digital, Bosch.IO

Business Model

B2B SaaS (PdM-as-a-Service)

- **Enterprise sale directly to refineries & heavy-industry operators**
- **Annual subscription per asset class**

Edge-First Delivery

- **Docker-based ACI-PdM agent runs on-site**
- **Billing, updates & analytics managed via our SaaS platform**

Pilot-to-Scale Pathway

1. **Pilot Fee** (one-time) → de-risk proof-point
2. **Recurring Subscription** → predictable ARR per asset & site
3. **Optional Share-of-Savings** → aligns upside on outage avoidance & efficiency gains

Go To Market

Strategy

- Fill in the predictive maintenance gaps where other vendors do not perform well
- Focus service on:
  - Compressors
  - Fired Heaters
  - Distillation Towers

Forward Milestones

- Formal ACI-PdMaaS minimum viable product
- Expansion of IP
- Compressor / fired heater demonstrator software
- Refinery pilots (Motiva)

Customer Acquisition Methods

- Network through industry connections
- Conference demonstrations (e.g., CERAWeek, NARTC, ANS)
- Publishing

Projection

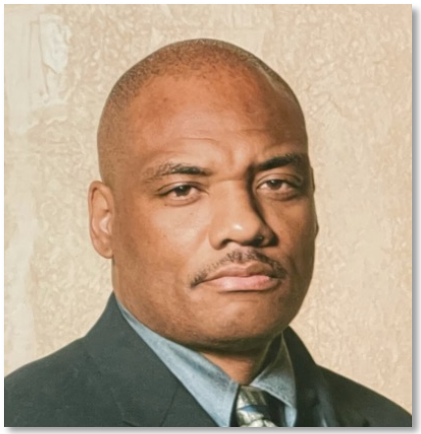
$ Thousands

5-Year Financials	Year 0	Conservative Projections				
	2025	2026	2027	2028	2029	2030
Mech Engineers + SW Engineers	4	7	15	17	18	18
Refinery Sites	0	3	20	20	20	30
Percent of Assets per Site (%)	-	-	-	50	100	100
Pilot Site Fee	0	$ 500	$ -	$ -	$ -	$ -
Production Site Fee	0	$ -	$ 2,000	$ 14,000	$ 28,000	$ 28,000
Total ARR	0	$ 1,500	$ 40,000	$ 280,000	$ 560,000	$ 840,000
Total Revenues	$ -	$ 1,500	$ 40,000	$ 280,000	$ 560,000	$ 840,000
Expenses	$ (954)	$ (2,956)	$ (5,618)	$ (6,461)	$ (6,850)	$ (7,150)
Cashflow from Operations	$ -	$ 1,500	$ 40,000	$ 280,000	$ 560,000	$ 840,000
Cashflow from Financing	$ 1,000	$ 1,500	$ -	$ -	$ -	$ -
Net Cash Position (EOY)	$ (954)	$ (1,456)	$ 34,382	$ 273,539	$ 553,150	$ 832,850
Balance	$46	$ 90	$ 34,472	$ 308,011	$ 861,161	$ 1,694,011
Operating Margin	--	--	86%	98%	99%	99%

Team

Founder/CEO

Rube Williams, Ph.D.



Los Alamos NATIONAL LABORATORY

AEROJET ROCKETDYNE

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TEXAS A&M UNIVERSITY

Product Development

Chief Engineer

Cable Kurwitz, Ph.D., P.E.

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ComEd
An Exelon Company

TEES
TEXAS A&M ENGINEERING EXPERIMENT STATION

Product Operations

Advisor

Jimi Hendricks, MBA

RICE

MARINES
THE FEW. THE PROUD.

GENERATE

Data Operations

Disrupt AI-Based Predictive Maintenance

Powered by Artificial Cerebellar Intelligence (ACI)

Ask: $1 M → 12-Month Runway

Use of Funds:

- Advance product development & expand IP
- Deliver three paid compressor & heater pilots
- Launch go-to-market operations
- Prepare for Series A fundraising

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