

CI-Led AI (Part 1)

A Framework for Human-Centered Implementations

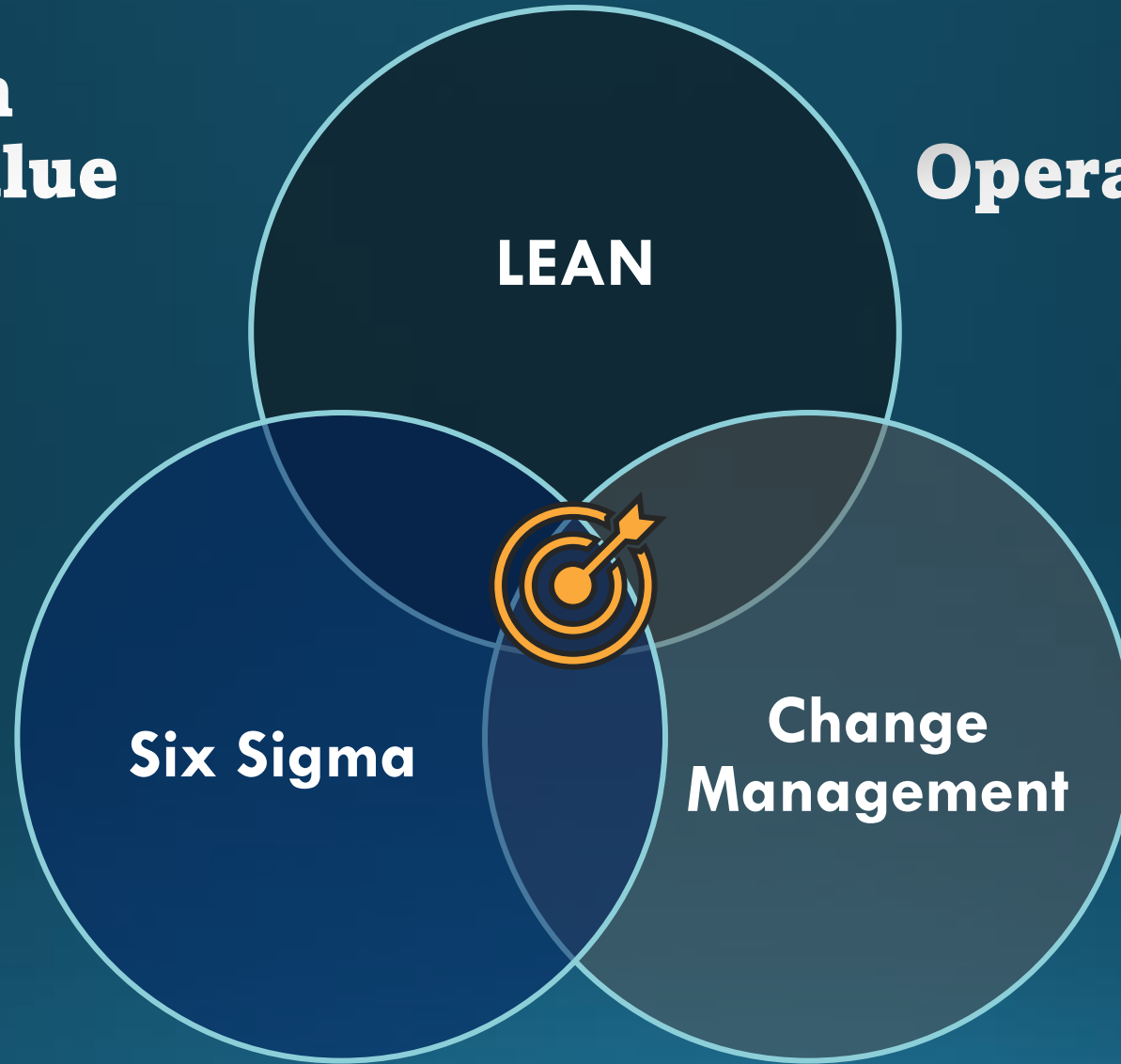
Jenna Adams-Valadez

Owner / Principal Consultant for The Lean Eye, LLC

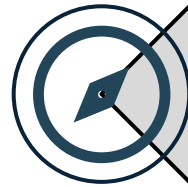


**Maximum
Customer Value**

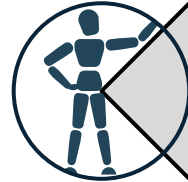
**Maximum
Operational Stability**



Objectives



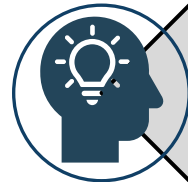
1. Anchor AI in What We Already Know



2. Clarify that AI is a Tool, not a Strategy



3. Discuss Ethical Realities & Concerns



4. Review Business Use Cases



5. Prepare for Part 2



We need “Toyota Way” as much as “TPS”

What Toyota Way Principles would be supported by strategic AI utilization?

PHILOSOPHY

(Long-Term Systems Thinking)

PRINCIPLE 1

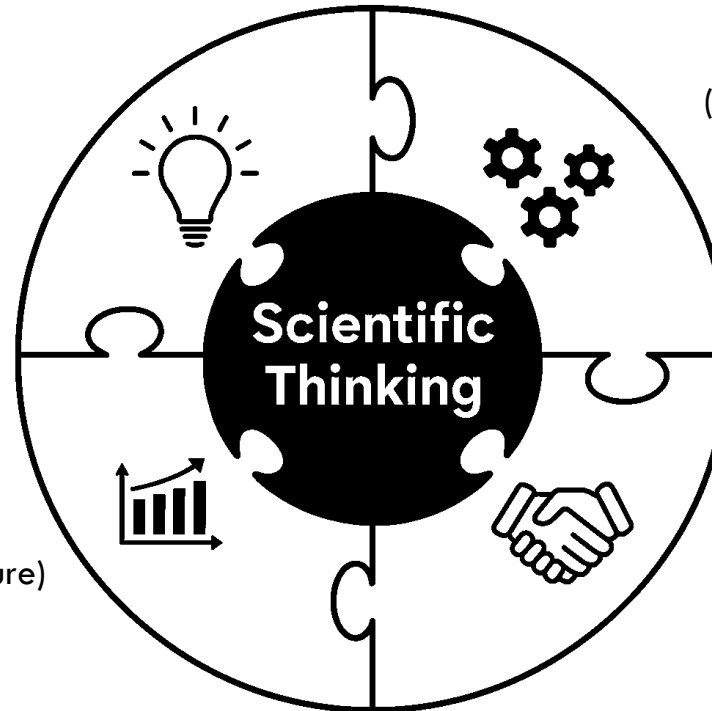
Long Term Systems Thinking

PROBLEM SOLVING

(Thinking Scientifically to Improve Toward a Desired Future)

PRINCIPLE 13

Align Goals



PROCESS

(Struggle to Flow Value to Each Customer)

PRINCIPLE 8

Technology to Support
People and Processes

PEOPLE

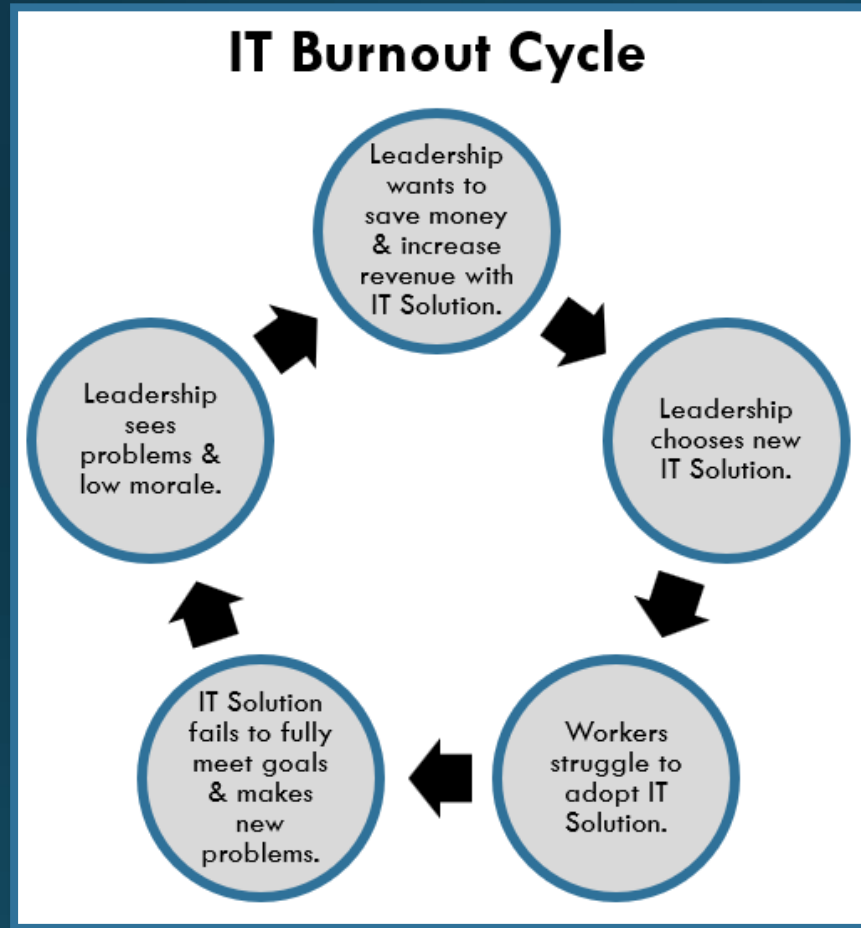
(Respect, Challenge & Grow Them)

PRINCIPLE 10

Develop People and Teams



AI is a Tool, not a “Strategy”



- Most businesses do not need advanced AI
- It's easy to become overly reliant without skilled oversight or training
- Many already own AI and aren't using it
- Poor implementations fail for the same reasons IT always has



The Reality of AI's Limits

- Overreliance without skilled oversight or training
- Bad data (and prompts) in, bad and biased responses out
- Human intervention is still needed
- Legal ambiguity for intellectual property rights and innovation credit
- It takes time to understand options, then select right models

Exhibit: The steep drop from pilots to production for task-specific GenAI tools reveals the GenAI divide

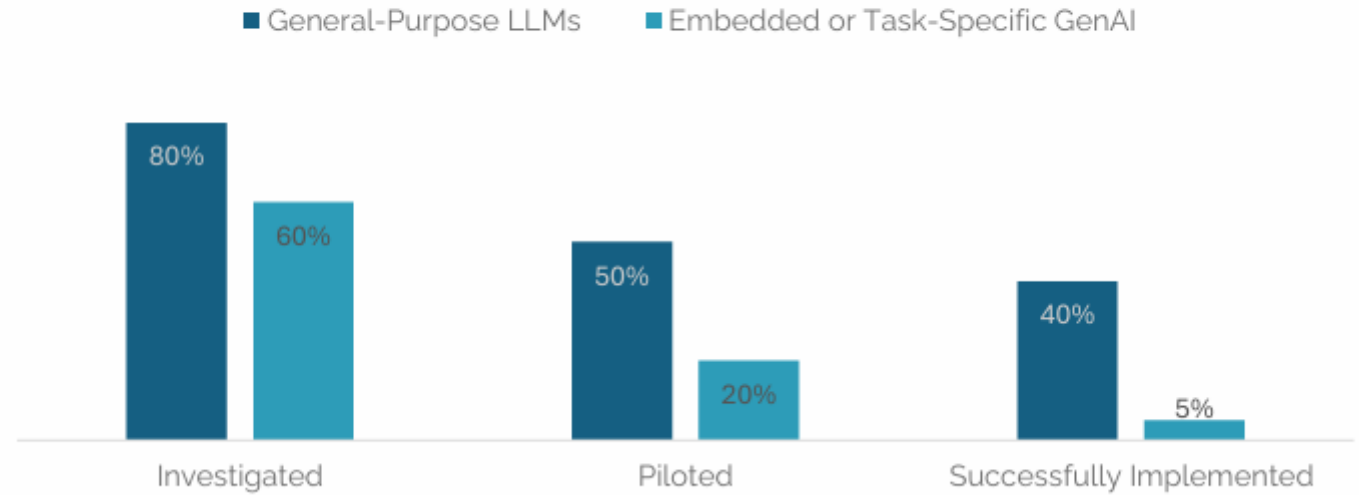
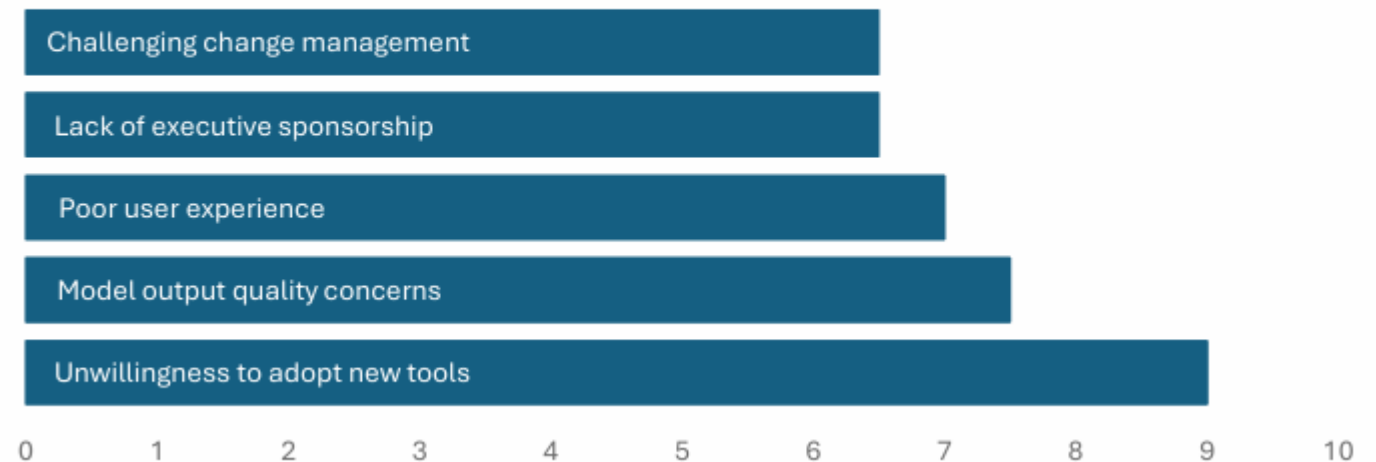


Exhibit: Why GenAI pilots fail: top barriers to scaling AI in the enterprise

Users were asked to rate each issue on a scale of 1-10



Ethical Considerations

Am I keeping operations “human-centered?”

People need these key elements to be content or fulfilled with work:

- Connection to Tasks & People
- Clear Expectations & Feedback
- Opportunities for Growth
- Fair Compensation
- Autonomy
- Security

The “goal” is more
meaningful
human engagement
every day.

“...employees are
offering a very
important part of their
life to us. If we don’t
use their time
effectively, we are
wasting their lives.”

— Eiji Toyoda
Former President & Chairman of
Toyota Motor Corporation



5 Core Risk Areas



DATA EXPOSURE



ACCURACY &
HALLUCINATIONS



BIAS & FAIRNESS



OWNERSHIP & IP



PEOPLE IMPACT

Practical Safeguards

- Continued HIPAA & PII training
- Approved tools list
- Governance & clear standards
- Human review standards
- Training before scaling
- Audit procedures & checklists
- Change management ownership



AI in Daily Lean Practice



PROJECT TRACKING



SOP DRAFTING FROM
EXISTING MATERIALS



ONBOARDING & TRAINING
DEVELOPMENT



ENGAGING PEOPLE
FOR PROBLEM SOLVING



DATA PULLS & REPORTS
FOR SYSTEMIC VIEWS

1. Is the process stable?

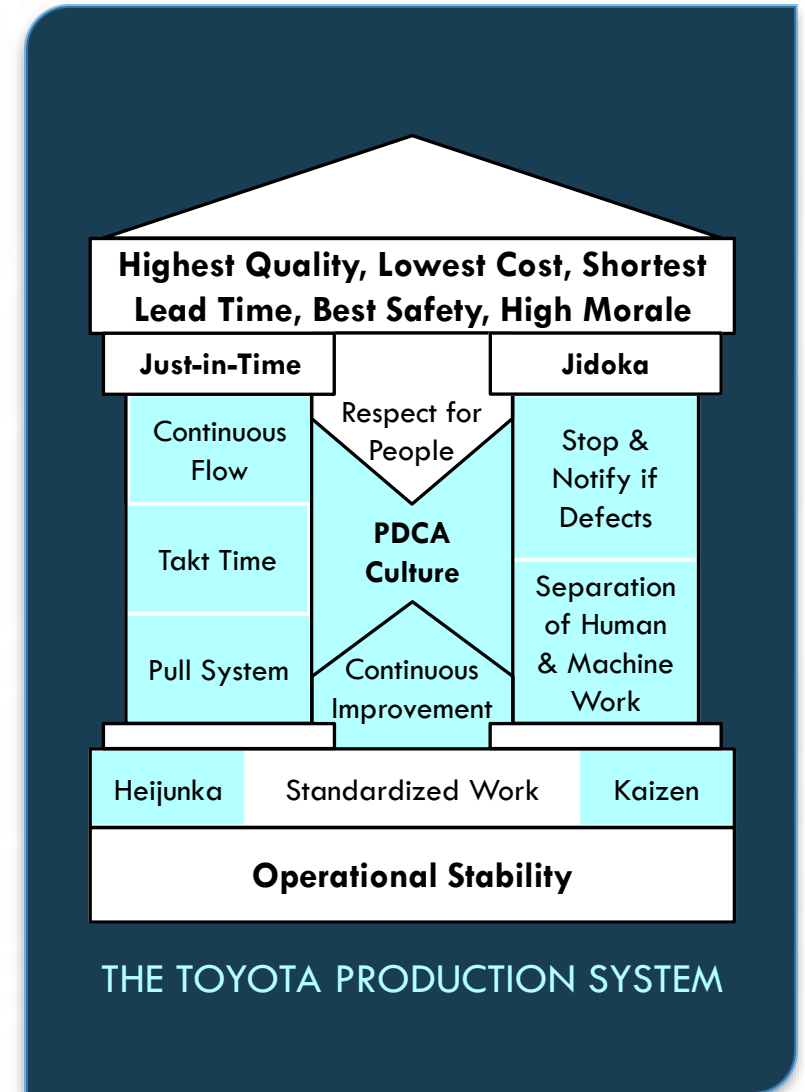
2. Is the work repetitive or cognitive?

3. What happens when it's wrong?



EXAMPLE 1: Automated Leading Indicators with Systemic View

- I. Create a unified, live digital map of processes and dependencies from different systems using human subject matter experts, a Graph Neural Network model and Process Mining Software (UI Path, Celonis, ABBY Timeline).
- II. Use Unsupervised Anomaly Detection models (Azure Anomaly Detector, You Only Look Once/YOLO), to continuously monitor and flag current deviations.
- III. Use multiple integrated models (XAI, Python, Databricks, Tableau/Power BI) to break down the root cause of predicted deviations.

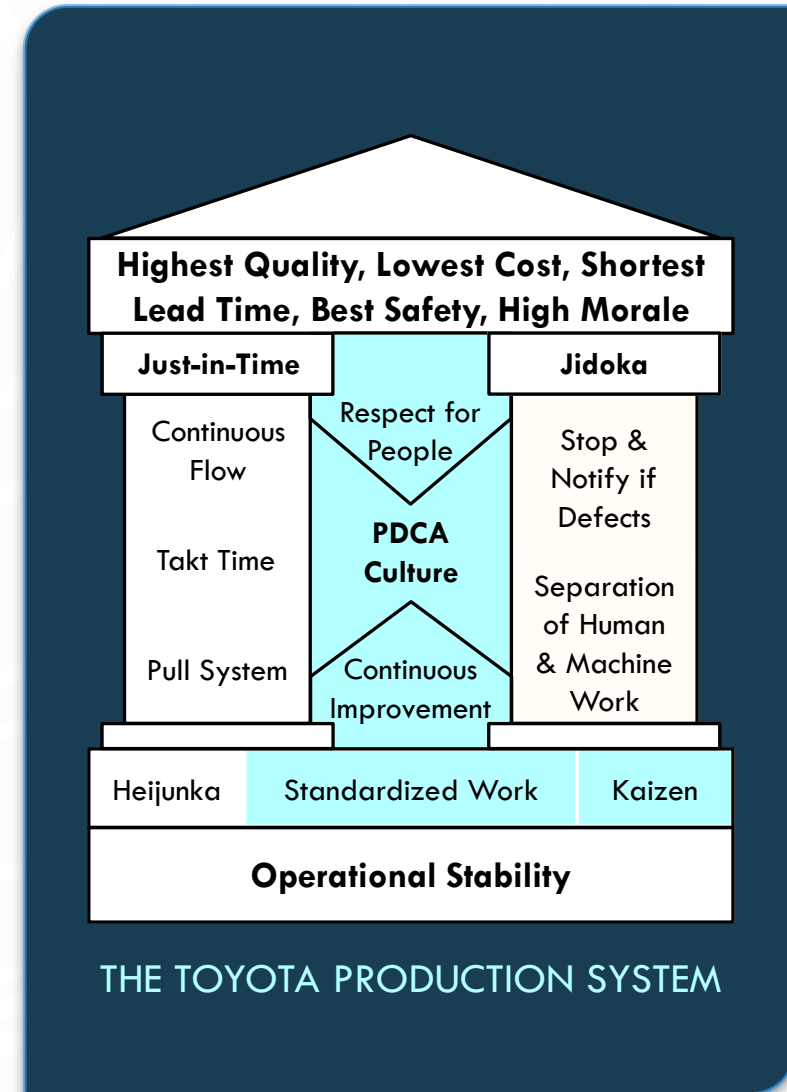


**My interpretation combining John Shook's original "TPS House" Diagram, Jeffrey K. Liker's "Figure P.1" in The Toyota Way, Second Edition, and "Toyota Way 2001" from www.Toyota-global.com.*



EXAMPLE 2: Preparing for the “Silver Tsunami”

- I. Record sessions using Otter.ai, Zoom, or Microsoft Teams for video/audio recording and transcription.
- II. Feed transcripts to ChatGPT or Copilot with prompts like: “Convert this discussion into a standard work document,” including a format of what the document should include.
- III. Ask human subject matter expert(s) to review for accuracy, efficiency, and other valuable insights.
- IV. Use Miro AI or Lucid Chart AI to create visual process flow from the documented steps.

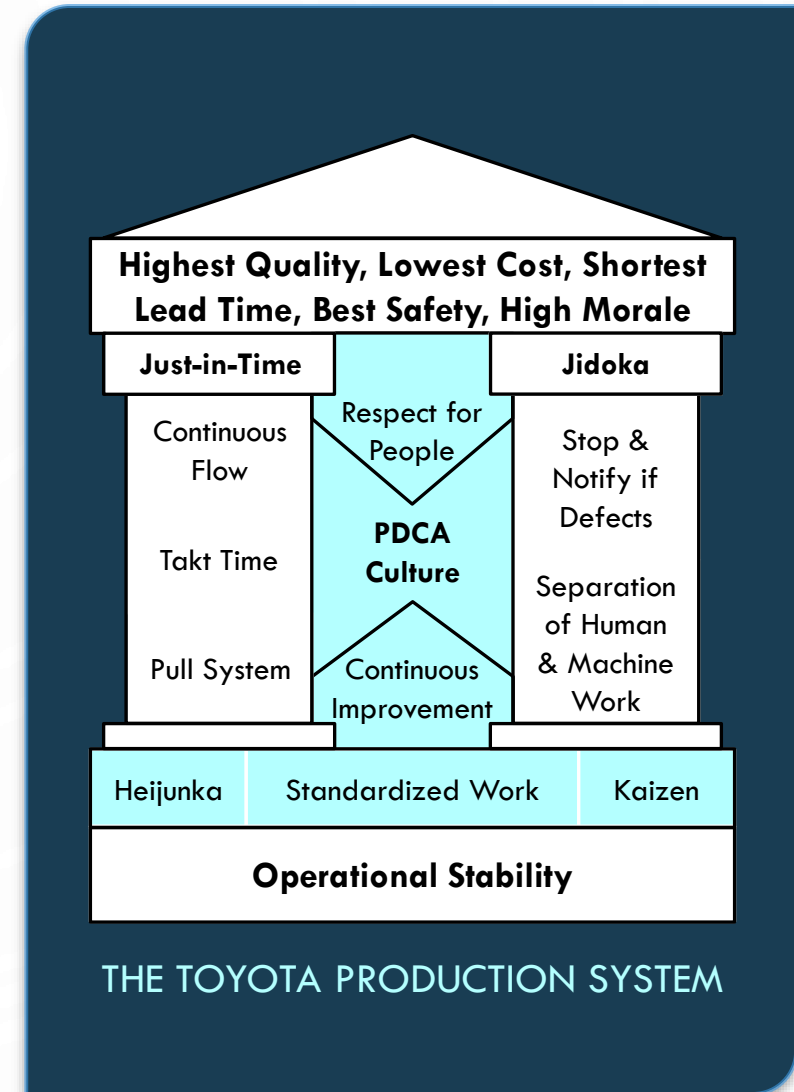


**My interpretation combining John Shook's original "TPS House" Diagram, Jeffrey K. Liker's "Figure P.1" in The Toyota Way, Second Edition, and "Toyota Way 2001" from www.Toyota-global.com.*



EXAMPLE 3: Spreading Lean Culture Fast Enough to Show Impact

- Use Collaborative and Agent-based AI Systems (will vary by need and projects) to manage/organize data, create documentation, evaluate metrics, and create customized tools.
- Use a Generative AI models (Claude, GPT, Mistral, etc) to help analyze and write SOPs, as well as structure knowledge centers.
- Use Machine Learning models (GPT, Claude, Gemini, LLAMA, etc.) to assist with self-evaluations of coaching practices by feeding meeting transcripts into various models after training them on highly rated reference materials.



**My interpretation combining John Shook's original "TPS House" Diagram, Jeffrey K. Liker's "Figure P.1" in The Toyota Way, Second Edition, and "Toyota Way 2001" from www.Toyota-global.com.*



Be Wary of “AI Washing”



Why does this require AI instead of traditional software, automation, or search?



What type of AI is being used?



What data powers the solution?



How will success be measured?



What happens when the AI is wrong?



What measurable improvement does it provide over the current process?



What happens after “Gen 1” for the people who own the process?

*The most successful AI users aren't the most technical.
They're the clearest about their processes, people and purpose.*



Scan QR Code to connect with Jenna Adams-Valadez