Caltech Center for Technology & Management Education

# Detecting AI Vaporware:
## Key Strategies for AI Vendor Management

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## Market Hype?

**From soothsayers to snake oil salespeople, markets have always been susceptible to those who can convince unsuspecting individuals of their bespoke remedies. When individuals are either uninformed or desperate, the persuasive words of the salesperson can sway them to invest heavily in whatever concoction will cure their ailments. From curing wild hallucinations to gaining the strength of 1,000 LLMs with agents, AI vendors will attempt to convince your organization that they have the remedy.**

The landscape of generative AI, especially in a world redefined by innovations like ChatGPT, has become a competitive theater where vendors vie for supremacy with grand narratives of capability. Amidst this tumult, the challenge lies in discerning genuine innovation from well-crafted vaporware.

## Strategic Vendor Interactions

In the relentless pursuit of market dominance, it is easy to fall prey to the urgency of adopting AI without the due diligence that should precede such a commitment. The key to effective AI vendor management is not just in asking questions but in asking the right ones. This guide equips you with the tools to cut through the hyperbole and assess the value vendors bring to your organizational goals.

## Key Questions to Ask AI Vendor

### 1. Do They Have a Demo?

Regardless of the slides, case studies, white papers, and marketing pitches, the first tangible step is a demo, and your vendor should facilitate this as quickly as possible. During a demo, it is common for technology evangelists to use buzzwords without providing substantial information. Therefore, hearing directly from the product managers or consultants who built the demo is crucial. Don't hesitate to ask the tough questions. A major red flag is when a demo is a UX-only mockup, which indicates that the product is not ready and that the company is looking for early adopters.

### 2. Who Is Doing the Talking?

Once you see a demo, do they allow you to speak to the architects or engineers who built the system? Vendors frequently have a team of product reps who are "in the know" but not central to developing the product. You want to ensure you talk to the demo builders since you frequently interact with those developers for feature requests. While the product may look flashy and well-provisioned, questions about how it operates within other systems can quickly unravel a hastily created demo. If the demo team or supporting engineers cannot offer examples of how the demo plays with other systems, particularly enterprise ones, it may be time to consider other options.

**Figure 1:** *AI humanoid robot looking pensively into the future. Seen in decks from every significant AI vendor on the market.*


**Figure 2***: A faceless person holds a glowing semiconductor chip. This image can also be found in every vendor deck on the market.*

**3. Is the Demo Recorded?**
If the demo was pre-recorded, request a live demo where you can ask questions; recorded demos should already be available on YouTube or the company site. If the demo has a robotic voiceover, run! Kidding aside, you want to see the demo live or at least have a technical product manager give you the play-by-play of a recording. Still, any good demo team should be able to run you through the core functionality while simultaneously answering questions. If they aren't able to answer your questions or defer them to the development team, they aren't ready for primetime.

**4. Who Created the Demo? (Consulting Firms Only)**
Is there a dedicated development team, or are these team members on the bench waiting for the next assignment? In most consulting firms, employees between projects will be on the "bench." Their next staffed role could be tomorrow or six months from now. These bench team members are frequently called upon to build demos or "firm initiatives." It will be necessary to clarify if a bench team built the demo or if a dedicated development team has long-term familiarity with the product offering. If the latter, the team can handle feature requests promptly, and your involvement in deploying the AI product can go much smoother.

**5. Is the Demo Based on an API Connection?**
Architecture is a critical consideration. What happens when the API connection changes? For example, what happens when OpenAI's GPT-4.0 is deprecated, and their system still makes an API call? Are there version updates to consider, and will you be given priority in knowing this beforehand? AI systems built on an API connection to a foundation model frequently face deprecation and must move to the latest model. Entire companies have been founded upon OpenAI GPT models, but they dissolved when OpenAI updated their native features.

**6. Are the Marketing Materials from Your Vendor Before November 2022?**
Most companies have recently pushed to label themselves as Gen AI experts or advisory firms. Since ChatGPT's launch in late November 2022, every firm has been a self-proposed AI expert. What were they selling before 2022? If their products were primarily blockchain, Web3, or dashboards, then it's time to reconsider. If their early products involved MLOps, machine learning pipelines, and NLP, then you are dealing with experts.
Investigate your vendor's history with questions like:

1. How does your DevOps team interact with your ML or AI team?
2. What projects did you do before 2023 that required storing unstructured data, and how was it managed?
3. Did you use transfer learning techniques before 2023, and for what projects?

**7. Are the People You're Speaking to Gen AI Experts?**
Hype waves attract every sort of technical-adjacent person, but their background reveals their expertise. Look for professionals with significant work in data science, NLP, and machine learning before November 2022. Check for GitHub contributions, articles, or conferences to gauge their involvement. Be cautious with those who frequently jump on hype curves or have superficial credentials.

**8. What Does the AI/ML Team Look Like?**
A mature demo team should include a technical project manager to bridge business requirements with issue tracking, data engineers to manage data sources, ML or AI engineers to tune models, security experts to oversee credentialing, and backend engineers focused on storage techniques. These roles highlight the technical complexity required for a successful demo and implementation.

**9. What Is the State of Their Code Base?**
Ask specific questions about the state of their code base. Is the code for the demo or product deployment ready? Is it versioned or stored in a central repository? These questions can reveal whether you are reviewing a hastily built product or one that evolved through a more structured development process.

## How Do I Start?

Begin by asking yourself why you need this AI technology. Is it to increase speed to market, reduce costs, or achieve a specific capability? Avoid being distracted by shiny demos. Use critical thinking to define your problem or opportunity, gather inputs and requirements, and focus on tradeoffs when making choices. Remember, no AI can compensate for poor vendor management, but with this structured approach, you can make well-informed decisions and reduce risks. Take that vendor call, but do your homework first.

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