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The Product-Minded Engineer

in the Age of AI-Driven Development.

Agenda

Chapter

01 The Traditional View of Engineers

Engineering Education Today

- **Build-first education**
  Heavy emphasis on implementation and technical fundamentals.
- **Engineering rigor**
  Algorithms, system design tradeoffs, and efficiency optimization.
- **Problem decomposition**
  breaking complex work into structured steps.
- **Analytical thinking**
  logic, critical reasoning, and correctness-focused mindset.

Engineers in Traditional Organizations

- **Execution-first role**
  Engineers are brought in to implement predefined requirements.
- **Separation of thinking and building**
  Product decides what, engineering focuses on how.
- **Optimization over intent**
  Deep focus on performance, scalability, and efficiency—not why.
- **Linear delivery model**
  Handoffs, late feedback, and limited direct customer insight.

Engineers that Stand Out

- **Broader focus**
  Strong interest in the product's value to users and the business.
- **Dual perspective**
  Identify both engineering challenges and product problems.
- **Problem-oriented mindset**
  Move beyond code delivery to solving real user needs.

They are product-minded engineers.

"Good engineering isn't just about coding, it's about asking the right questions."

Chapter

02 The Product-Minded Engineer

Product Understanding 

1. **Curiosity and a keen interest in "why?"**
   Ask questions. Listened.
2. **Interest in the business**
3. **Understand how the end-user uses the product that you built**
   User behavior and data.

As a PM

- **Embrace their curiosity**
- **Give them direct exposure to customers**
- **Never do customer research or interviews without engineers**

Product Judgment 

1. Proactive with product ideas/opinions
2. Offering product/engineering tradeoffs upfront
3. Practical handling of edge cases
4. Bring healthy conflict

As a PM

- Embrace this. They're questioning the work, not you as a person
- They are not trying to take your job or replace you. They're just helping you
- Start by assuming they're onto something, rather than seeking to defend your point of view
- It's not rebellion. It's a sense of ownership. They care about the product

Feedback 

1. **Seek early feedback**
2. **Quick product validation cycles**
   A/B testing is one of the tools.
3. **Strong product instincts through repeated cycles of learning**
   Google Analytics and monitoring the error reporting tools.

As a PM

- **Empower engineers to have direct exposure to those feedback loops**
- **Empower product-minded engineers with responsibility to triage incoming feedback**

Collaboration 

1. **Strong communicator**
2. **Great relationships with non-engineers**
3. **End-to-end product feature ownership**
   After rollout, they still actively engage with product managers, data scientists, and customer support channels, to learn how the feature is being used in the real world. It can take weeks to get enough reliable data to draw conclusions.

As a PM

- **Encourage engineers to share their learnings**
- **Work on draft content alongside the engineers**
- **Give them opportunities to present to stakeholders**

Chapter

03 Becoming a More Product-Minded Engineer

Understand how and why your company is successful

- What is the business model?
- How is money made?
- What parts are most profitable, what parts of the company are expanding the most?
- Why?
- How does your team fit into all of this?
- Who are our users?

Build a strong relationship with your product manager

- **Proactive partnership**
  Build trust and a working relationship early.
- **Leverage PM mentorship**
  Product managers often welcome engineers' product curiosity.
- **Ask better questions**
  Engage before implementation, not just during delivery.
- **Signal intent**
  Clearly communicate your desire to be involved in product decisions.

Engage in user research, customer support, and other activities

- **Get closer to users**
  Participate in research, support, and feedback channels.
- **Learn through exposure**
  Observe how the product is actually used in practice.
- **Cross-functional pairing**
  Work with design, UX, data, and operations.
- **Context over assumptions**
  Replace second-hand requirements with direct insight.

Bring well-backed product suggestions to the table

- **Take initiative**
  Proactively propose improvements, not just implementations.
- **Start small**
  Validate ideas within the scope of your current projects.
- **Think end-to-end**
  Frame suggestions in both product value and engineering effort.
- **Enable prioritization**
  Make tradeoffs explicit so ideas fit naturally into the backlog.

Offer product/engineering trade-offs

- **Go beyond technical tradeoffs**
  Consider product alternatives, not just implementation choices.
- **Reduce effort through scope**
  suggest simpler product options with similar user value.
- **Make tradeoffs explicit**
  clarify impact on cost, complexity, and outcomes.
- **Invite feedback**
  treat tradeoff discussions as collaborative, not prescriptive.

Chapter

04 Common Misconceptions

01 /

Product Minded ≠ Product Manager

Engineers do not replace PMs; they complement them. PMs focus on the bigger picture.

02 /

Product Minded ≠ Saying “Yes” to Everything

In fact, product-minded engineers often advocate for less.

03 /

Product Minded ≠ Code Quality Doesn't Matter

NOSENSE!!! Remember, the Clean Code will always matter - the code quality is part of the engineering. Even in the Age of the AI-Driven Development.

Chapter

05 Age of AI-Driven Development

How AI Supports Engineering

- **Execution acceleration**
  AI generates boilerplate, prototypes, tests, and translations.
- **Code assistance**
  Helps read, refactor, review, and work with legacy code.
- **Workflow support**
  Assists with PR reviews, CI/CD, and developer productivity.
- **Human oversight required**
  AI executes fast, but engineers provide context, judgment, and direction.

AI is like a junior engineer on 10 Red Bulls:
It writes code at light speed, but only exactly what it is asked to write, without understanding the bigger picture.
This is where human engineers must lead the process through guidance, monitoring, and supervision.

Product-Minded Engineers and AI-Driven Development

- **Shift the focus**
  When the big part of execution is automated, the engineers can focus more on other topics like product thinking.
- **Product context matters more**
  AI lacks user intent and business awareness.
- **Amplified impact**
  Strong product thinking turns AI speed into real value.
- **Leverage through direction**
  Product-minded engineers using the product knowledge guide the AI easier toward the right outcomes.

The Future Belongs to Product-Minded Engineers

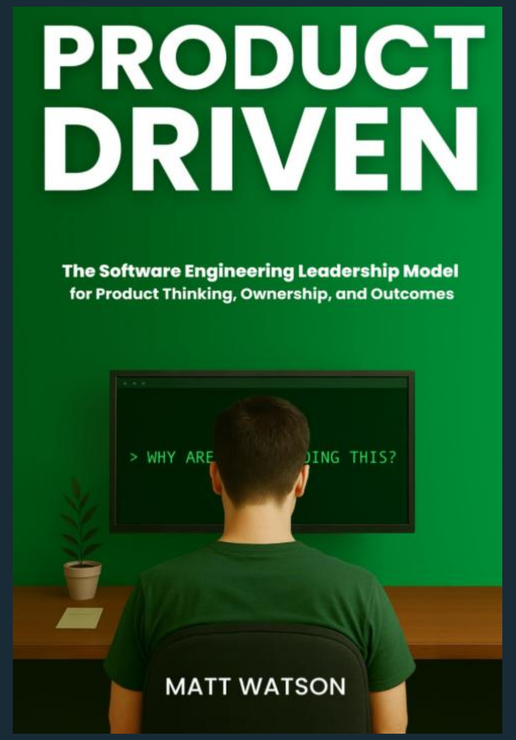
The Product-minded engineers is even more needed in the AI-driven development where we'll have more time to focus on the product.

In an age where AI handles the syntax, engineers who master user empathy and product thinking will define the future of software.

> Product-minded engineers will outperform other engineers in an AI-accelerated world.

Resources

Focused on the engineer's mindset, decision-making, and product impact.



A product-centric perspective on how teams and organizations build and scale software products.

Bad: the book underplays the importance of code quality, positioning it as secondary to speed and execution

Thank you!