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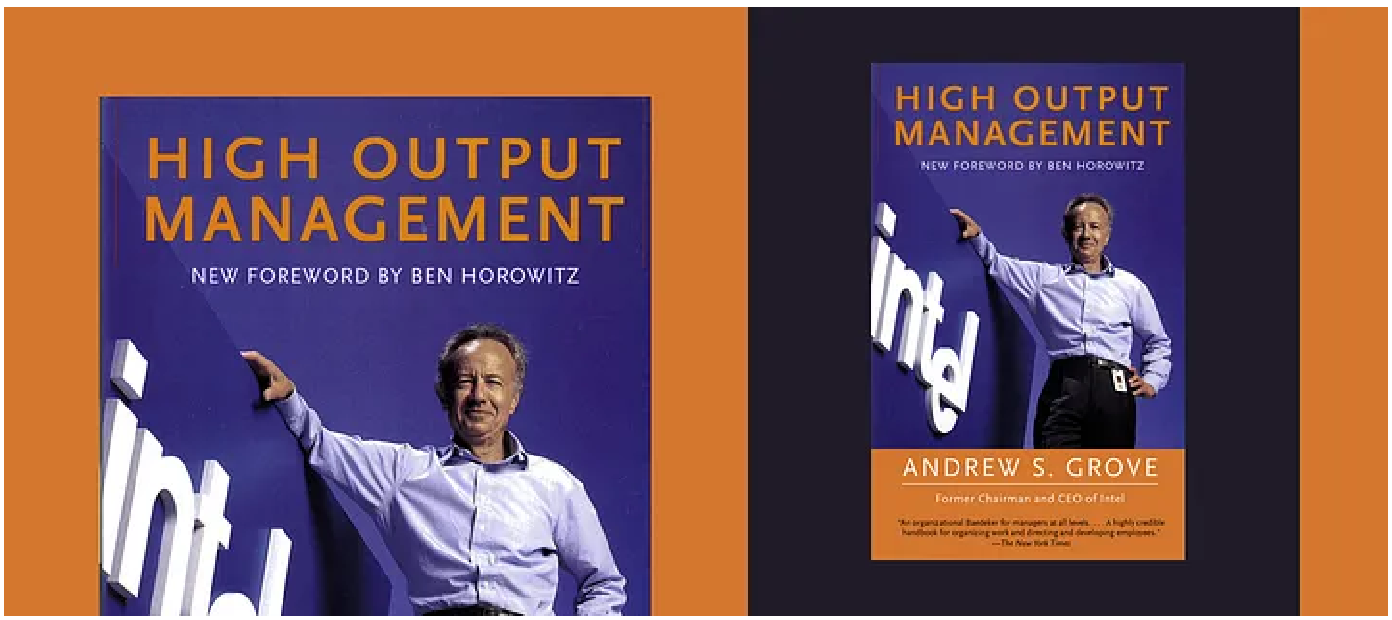
9 min read · Jan 25, 2016

Top Takeaways from Andy Grove's High Output Management



"Stanford Business School or Y Combinator?" Because I went through both, I get that question sometimes.

"Apply to both," I reply, "they're each *amazing*. YC is outstanding preparation for building an early stage company, and Stanford for leading as an executive and board member. But if you're managing a company, do one more thing: read HIGH OUTPUT MANAGEMENT."

The book is legendary in Silicon Valley. It's a crash course for middle managers by former Intel CEO Andy Grove, with a foreword by Ben Horowitz, and praise from Mark Zuckerberg, John Doerr, Marc Andresseen, and leaders across the tech industry.

To quote former Apple board member Bill Campbell: "High Output Management is a bible that every entrepreneur and every manager in the country should look at, read and understand." It costs ten bucks. It takes a day to complete. It's probably worth several million dollars in mistakes you'll avoid during your career.

For a "blog post version", below are notes by chapter that I share with managers at my own company as a reference for diving deeper (Meetings wasting time? Chapter 4. Awkward performance reviews? Chapter 13. Star achiever underperforming? Chapter 12 & 15).

One idea from the book to start: If you're motivated to become a better manager — and to improve the output of your organization — then there is nothing more important than training yourself.

Full disclosure: I worked for Andy as a teaching assistant while he taught at Stanford and helped release the 2015 edition of this book.

HIGH OUTPUT MANAGEMENT

On Organizational Output:

(Chapter 1) — **Everything is process**. Whether you're compiling code, hiring staff, or making breakfast, everything can be modeled as a repeatable production process. Understanding the elements of production — inputs, outputs, timing, limiting steps, quality controls, variability — lets us create and improve the "machinery" needed to fulfill our organizational goals. We all aim to achieve the same thing: high quality results in less time with least waste.

(Chapter 2) — **Focus on vital, measurable indicators of output**. The operations of an organization are like a "black box" in that you can't see everything that's happening on a daily basis. Indicators let you "cut holes" in the black box to get a view on what the output of the organization might be in future. Train your team to select a small number of objective, quantifiable measures of *output*, with leading and trending indicators, that can be reviewed daily and help transform a business for the better. Avoid measures of activity, subjective measures and unquantifiable measures. Your job is to identify, closely monitor and effectively manage the "vital few" indicators of performance over the "compelling many".

On Leading Teams:

(Chapter 3) — **Managerial leverage dramatically impacts organizational output.** Managers are responsible for increasing the output of their organizations and neighboring organizations they influence. Managers "leverage" their time by spending small amounts to have large impact through three activities: 1) information gathering, 2) decision making, 3) "nudging" others. Doing it right means ***positive*** high leverage actions: delegation with supervision, training and influencing processes with unique skills or knowledge. Doing it wrong means ***negative*** high leverage actions: delaying decisions, meddling, abdication, and unnecessary interruption.

(Chapter 4) — **Meetings are a medium of work.** People's time is highly valuable so all meetings should be purposeful and well-executed according to their type. *Process-oriented meetings* are held regularly to process substantive matters in batches, and come in three sub-types: First, *one-on-one* meetings between one manager and one staff member, are used to exchange information, discuss "thorny" issues, uncover problems and review important but not urgent items. Second, there are *staff meetings* among a manager and team for structured free discussion, sharing of different points of view, and decision making. Managers here balance being leader, observer, expediter, questioner and decision-maker — but avoid lecturing or weighing in too soon or too heavily to bias decisions that should be owned by the team. Third, there are *operational reviews*, where one organization presents to others to share information and receive questions and feedback. Managers play a critical role in keeping these very expensive meetings on-track. Finally, in contrast to regular meetings, there are *mission-oriented meetings* created ad-hoc to reach a decision. These should be rare (less than 25% of your time). The meeting chair should be well prepared and ensure the people vital to reaching a decision attend and are also prepared. Meetings are a medium of work, both too few and too many meetings create waste.

(Chapter 5) — **Decisions are the output of a process framed by six questions**. What decision is needed? By when? Who should be consulted? Who decides? Who ratifies or vetoes? Who needs to be informed? Managers need to bring together the right minds and discussions to get to a clear decision, and ensure support for the output, even from dissenters. Decisions should be made at the *lowest competent level* by someone with both detailed technical understanding and past experiences, both good and bad, from different implementation approaches. When no one has both, create a composite opinion from the people available.

(Chapter 6) **— Manage short-term objectives based on long-term plans.** Be thoughtful about long term plans: 1) size your market, 2) know where you are, 3) find a hypothetical path to meet demand. Move towards long term plans using short-term *Objectives* (sub-goals) and corresponding *Key Results* (clear, unambiguous milestones to pace progress). Cascade "OKRs" across organizations, so one manager's key results might make up the objectives of their direct reports, and so on. For example, if a manager's objective was to "keep a factory expansion plan on schedule" with one key result being "obtain plant expansion decision by October", she might delegate that key result to a staff member as an objective, and so on. OKRs provide clarity and alignment, but they can't be run on auto-pilot. It takes judgment and common sense to guide day-to-day priorities based on OKR hierarchies.

On Leading Enterprises:

(Chapter 7) — **As organizations grow speed decreases while leverage increases.** Businesses become more complex as they grow. Duplication and redundancy increase — multiple products may lead to multiple marketing teams, for example — and decisions are constantly being made on whether to centralize functions for consistency and greater leverage or to keep them decentralized for greater speed.

(Chapter 8) — **Functional teams increase leverage, mission-oriented teams increase speed.** *Functional* organizations (e.g. "Recruiting", "Finance", "Human Resources") offer leverage by centralizing services to deliver benefits to an entire enterprise, rather than a subset. The trade-off is increased complexity and delay in managing requests from business units. In contrast, *mission-oriented* organizations (e.g. "Component Business Group", "Systems Business Group") are decentralized and pursue objectives largely independent of other parts of the enterprise, trading-off leverage for speed (closer proximity to customers and faster time to react). *Speed is the only benefit to mission-oriented organizations, in all other cases functional organizations are superior.* The exception is conglomerates, when high diversity in business goals makes functional teams impractical.

(Chapter 9) — **Dual reporting increases both leverage and speed.** Invented at NASA as "matrix management" individuals in dual reporting structures have managers in both mission-oriented and functional teams (e.g. A financial controller reports to both the Division Manager and the Director of Finance). While this solution creates complexity, the cost of complexity is outweighed by the benefits of operating in both functional and mission-oriented teams.

On Leading People:

(Chapter 10) — **Manage teams by setting expectations and cultural values.** When Complexity, Uncertainty and Ambiguity ("CUA"), is low, a team's performance is influenced by expectations (via role definitions, setting objectives, checking-in and reviewing performance). When CUA is high, behavior is influenced by cultural values (as articulated and exemplified by the manager). Managers need to choose which mode to use depending on context.

This model assumes individuals share *group interests*, if individuals are too highly *self-interested* their behavior will be influenced very differently. In low CUA situations they'll behave based on incentives (a.k.a "free market forces", like commission rewards for selling certain products). In high CUA situations individuals with high self-interest and low group-interest will be unmanageable, like people panicking on a sinking ship. People's mix of self-interest and group-interest can shift over time. It's a manager's responsibility to align team members to group interests.

(Chapter 11) — **Motivate employees by "shaping the field" based on what drives them.** Increasing motivation and training are the only ways a manager can increase individual performance. To increase motivation, understand an individual's highest level needs, whether it's increasing competence or achievement, and preferred measure, whether compared to others or objective benchmarks. Then, like a coach motivating athletes, "shape the field" to create the motivation to grow team members to the limit of their abilities.

(Chapter 12) — **Manage in the context of task-relevant maturity.** When you're managing a skilled sales person with *high task-relevant maturity* your involvement should be minimal, focused only on setting and monitoring high-level objectives. Transfer that same person into a plant management role, where they'll initially have *low task-relevant maturity*, and you're more effective with a lower-level, task-oriented management style, focused on "what", "when", and "how" of operations. Getting this right is difficult because it's hard for managers to assess task-relevant maturity and it's hard to override personal preferences in management style.

(Chapter 13) — **Use performance reviews to improve performance.** There are many motivations, emotions and mistakes associated with performance reviews, but improving performance — by providing clear task-relevant feedback and intensifying motivation — is paramount. Developing an effective assessment and message for an employee requires both including what's important *and leaving out what is not important*.

(Whether you're writing your first performance review, or your hundredth, I highly recommend reading this chapter carefully for its detail and examples.)

(Chapter 14) — **When an employee quits, it's the manager's fault**. This doesn't include people leaving for money or perks, but when someone is dedicated and loyal and feels their work is unappreciated it is the failure of the manager when they decide to leave. Most often employees bring up leaving at an inconvenient, highly busy time. Regardless, it should be high priority for a manager to make sure the employee feels heard and valued, to address their issues and retain them or transfer them to another team within the enterprise that meets their needs.

(Chapter 15) — **Recycle high achievers who are over-promoted.** As achievers are promoted they typically cycle between "exceeds expectations" at their current level and "meets expectations" in their first review after taking on greater responsibility. Management should be careful not to promote someone too quickly and having them "below expectations" at the higher level for too long. It's an embarrassing situation for management and the employee. However, instead of ejecting them from the company for low-performance, as is common, it's more useful to *recycle* the employee into a more appropriate role, despite the complexity, emotions and awkwardness that may be caused.

(Chapter 16) — **Training is the manager's job.** Training is the highest leverage activity a manager can do to increase the output of an organization. If a manager spends 12 hours preparing training for 10 team members that increases their output by 1% on average, the result is 200 hours of increased output from the 10 employees (each works about 2000 hours a year). Don't leave training to outsiders, do it yourself.

(Final Chapter) — **Assess your own output.** The final chapter offers a set of "homework" assignments to apply the ideas in the book. Andy sets the expectation that if you complete at least 100 points of the total possible 320 points offered in the assignments, you'll be a better manager. No better way to end a book about managing output than measuring the output of the book itself on the reader.

So those are my takeaways. Ben Horowitz has a blog post about the book and Washington Post has a write-up as well.

If you want to learn more about how Silicon Valley views Andy Grove, check out this video from the 2015 Churchill Awards.

Thanks so much for reading this far. Questions, comments or feedback are highly welcome in comments below.

Thanks to David Rogier for feedback on early drafts.

Management Leadership Entrepreneurship

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