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PROFILE

27-year software industry leader: 12 years of software engineering, 15 years as an engineering manager. I've co-authored open-source software tools used by millions of developers, spent a decade building Google's Chicago engineering office from a tiny outpost into a major hub, and dramatically improved the speed of Google Search for billions of users. My technical background gives me the ability to rapidly understand, summarize, and navigate through complex landscapes – though my preference is to focus on human problems. I've mentored and coached dozens of leaders, keynoted tech conferences, co-authored a popular book on the "art of teamwork" in software engineering, and have a strong track record of turning dysfunctional groups into inclusive, high-functioning teams. I believe the basis of all collaboration is based on a foundation of humility, respect, and trust – and I use these tools to build bridges across organizations.

LEADERSHIP SUMMARY

Engineering Director – 2005-2024 – Google, Chicago IL
Co-founded Google's Chicago Engineering office in 2005, moving from individual Software Engineer, to Engineering Manager, to Engineering Director.

- 2005: led a team of 10 engineers to build and launch a public open-source hosting site *code.google.com* as a "stable" alternative to SourceForge (all in the days before Git and GitHub!)
- 2011: led a team of 22 engineers to rewrite an underperforming advertising product to Google's scalable infrastructure
- 2015: Co-authored book Debugging Teams, now used as training material for new Google hires.
- 2016: led a team of 40 engineers to improve the reliability and speed of Google's Search product; changed the way thousands of other Google engineers worked, and dramatically increased Google's main source of revenue. *(more detail below)*
- 2021: Six-month pro-bono assignment into public service via Google.org. Led a team of 8 SWE to deploy open-source software for the City of Rochester, NY to help citizens more easily apply for public aid.
- 2022: led a team of 35 engineers, partnered with dozens of data scientists and UX researchers, to analyze the behaviors and productivity of 80,000 Google engineers, building an intelligence 'platform' to improve internal tools and processes.

Engineering Site Lead – 2014-2024. – Google, Chicago IL
Responsible for overall growth and health of Google Chicago's engineering culture.

- Grew the site from 80 to 650 engineers, managing all hiring and allocation processes, including a site-wide strategy to improve diversity & equity in hiring.
- Partnered with VPs across the company to orchestrate the mix of products and projects on site, and to manage complex re-organizations of personnel.
- Mentored and sponsored dozens of local managers through career changes & promotions.
- Public face of Google to local Chicago government (e.g. press interviews, visits from mayor)
- Cultural leader: established regular events, roundtables, and internal mobility processes across multiple divisions. Chicago office ranked "#1 office to work" within Google.

Software Engineer, Technical Lead – 2000-2005 – CollabNet, Brisbane CA

- Co-author of *Subversion* open-source version control system, now used by hundreds of companies and millions of developers around the world.
- Wrote much of the original codebase, co-authored the technical manual, managed dozens of volunteer contributors on open-source project.

EXECUTIVE CORE QUALIFICATIONS

LEADING CHANGE

As a senior engineering manager in Google's Search product, I was tasked with the critical organizational goal of improving the latency of Google search results; faster results increase product usage and ads revenue. Multiple leaders attempted this task but failed due to conflicting goals: thousands of Search engineers were improving the 'quality' of Search results by making them richer and more complex (to better satisfy user queries), but at the same time this had the external effect of sending more data to browsers, slowing results retrieval (and displeasing users.) Furthermore, no single team could be blamed for this latency problem, creating a 'tragedy of the commons' that could only be rectified through a new organizational and technical vision for cultural strategic change.

- I questioned conventional approaches to managing latency, which relied on doing 'emergency' code optimizations every 3 years – but never had lasting effect.
- I built a team of experts to drive performance; they revealed insights about the exact relationship between product latency and quality of results, then influenced others across the organization to begin "weighing" these two goals against each other in new ways that were short-term inconvenient, but better served the long-term interests of the organization as well as external users.
- I built a shared vision and then implemented plans to establish a 'core team' of latency consultants for reducing and policing changes that increase product latency via benchmarking to enforce engineering best practices); I simultaneously established a cutting edge program of proactive latency optimization across dozens of smaller teams.

This program and methodology was critical to shaping stakeholders' views (both engineers and VPs) across the division, particularly in the way we'd need to change infrastructure and platform designs.

- I dealt effectively with pressure in bi-weekly updates to eight VPs in Ads and Search divisions, showing them how our new strategy was rapidly adapting along with changing conditions of Search feature requirements, and gaining executive buy-in.
- After three years, this technical vision (of balancing 'optimizations' against 'preventive policing') proved to be a catalyst for organizational change, reducing overall Search latency by 25% and increasing company revenue by hundreds of millions of dollars. My team received a prestigious Google 'Tech Impact" award for the work.

LEADING PEOPLE

As an engineering director within Google's 'engineering productivity' division, I was presented with a deep human challenge of unifying a collection of small teams (about 70 people), each with similar subject matter expertise and overlapping offerings – critical to helping VPs understand and improve the overall performance of Google's engineering processes. Due to repeated stressful re-organizations, these teams did not wish to work together; they operated as islands which did not understand, respect, or trust each other.

- I began by resetting communication channels: mailing lists, chat rooms, and repeating meetings. Teams were placed into cross-functional committees responsible for solving shared problems. Over 6 months, this had the effect of facilitating cooperation and motivating teams to accomplish group goals.
- I listened carefully to manage and resolve conflicts between team leaders, and found common ground (utilizing "Crucial Conversations" methodology) to anticipate and prevent counter-productive confrontations.
- I created a monthly "all hands" event, focused on allowing individuals from across the teams to share and celebrate work. This created a psychologically safe environment – an inclusive workplace where a diversity of opinions and individual differences were valued to achieve our overall mission.
- I coached all seven team leaders in their careers, providing ongoing feedback and providing opportunities to learn new skills and find their optimal contributions to the new unified organization.
- I directed not just engineers, but also Product Managers, Designers, and Data Scientists to collaborate closely. Because I pushed these sub-teams to depend on each other directly, they delivered a new internal-intelligence product which unified multiple redundant metric data-schemas (through central data validation) into a single Data Warehouse, with a beautiful new human-centered design UI for customers.

RESULTS DRIVEN

As an engineering manager within Google's Ads division, I was put in charge of an internet advertising product (inherited through corporate acquisition) that was both unreliable and desperately underperforming for customers. The team of 22 engineers was frantically attempting to rewrite the product, but were directionless and making no progress; VPs had lost faith in the effort and were on the verge of canceling it.

- I carefully examined work in progress, identifying and analyzing problems, weighing the relevance and accuracy of results. I diagrammed all work tasks and dependencies, and discovered much of the work wasn't strictly necessary. This allowed me to take calculated risks by cutting certain work, while determining new objectives and setting clear priorities, and delegating new work to individuals, holding myself and teammates accountable for measurable, high-quality, and cost-effect results through careful OKR management.
- I appropriately applied principles, procedures, and requirements stemming from the "Critical Chain" management methodology. By keeping a careful eye on the ever-shifting 'critical path' of work, I was able to make well-informed, effective, and timely decisions to keep that fragile line of work unblocked and moving at maximum speed through daily agile software practices.
- While the work was happening, I anticipated and met the needs of customers by meeting with them and understanding shifting requirements. This allowed me to evaluate alternative solutions in our rewrite-effort, eventually landing on building a AI-based solution in Google's well-known cloud environment that would allow us to commit to continuous improvement as we tweaked the model, establishing maximum technical credibility with our users.
- In the end, our team met all organizational goals, finishing the product rewrite on time and surpassing customer expectations. The product featured a 300% improvement in performance with a reliable uptime SLO built around modern dev-ops practices and monitoring. In the words of one VP, "*this is the most impressive turnaround of a product I have seen in my entire career."*

BUSINESS ACUMEN

In 2014 the prior Google Chicago Site Lead left, leaving me with the job (as the most senior leader on site.) I inherited the responsibilities of managing site culture, hiring, project evolution, and DEI initiatives. With only 80 engineers in the office, we faced an ongoing existential threat of headquarters shutting down the office due to "lack of critical mass", and yet VPs in headquarters had no coordinated growth plan for the office.

- Identifying the external politics that impacted our office, I established connections to every VP with engineering teams in Chicago, creating symbiotic relationships and political capital. I catalyzed growth plans for each division, influencing which projects to include in our budget and investment management efforts across the site, monitoring department expenditures and using cost-benefit thinking to set priorities with executives at headquarters.
- In terms of human capital, I worked with the hiring budget of VPs across departments; I built and managed a multi-sector workforce, keeping an eye toward leveraging diversity of candidates (in our unique Chicago market); I ran our office wide hiring process, ensuring employees were appropriately recruited, selected, and appraised. I partnered with our recruiters to do targeted sourcing and recruiting to build and lead a modern technology organization.
- By 2023, the site had grown to 650 engineers ("critical mass") with no more threat of office shutdown.

BUILDING COALITIONS

Coming back to my work on Google Search (see "*Leading Change*" above for context), the objective of improving search latency required a tremendous amount of coordination across teams. Again, a 'tragedy of commons' scenario meant that no single team was responsible for the problem, and there was no common structure or incentive to care about the issue.

- I established an 'optimization program' across 20+ search teams, and built strategic relationships with key partners in each, providing consistent best-practice advice from a common source (my immediate direct team of experts.) These strategic partnerships allowed us to establish a broad consensus on how and why to improve latency.
- Identifying the internal politics impacting each team's work, I gave them "permission" to work on latency optimization by praising their efforts and making it highly visible to their local (and global) leaders, as part of a broader coalition collaborating across boundaries and departments.
- In the end, this widespread collaboration, in conjunction with 'policing' latency increases, had a massive positive business impact of reducing overall Search latency by 25% and increasing company revenue by hundreds of millions of dollars.

PROFESSIONAL HONORS/AWARDS

- Google's 'Tech Impact' award, for improving Search Latency
- "Tech 50" award, Crain's Chicago Business, 2019

PUBLICATIONS

- Debugging Teams: Better Productivity Through Collaboration, 2015, O'Reilly Media
- Software Engineering at Google, Chapter 6, *Leading at Scale,* 2020, O'Reilly Media
- Version Control with Subversion, 2008, O'Reilly Media

EDUCATION

- Bachelor of Science in Mathematics, minor in Linguistics.