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Innovation management best practices

CIO's book review; takeaways¹

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How Google Works

Eric Schmidt and Jonathan Rosenberg

Co-authored with Alan Eagle

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From 2001-2011, Eric served as Google's chief executive officer, overseeing the company's technical and business strategy alongside founders Sergey Brin and Larry Page. Under Eric's leadership, Google dramatically scaled its infrastructure and diversified its product offerings while maintaining a strong culture of innovation. Johnathan Rosenberg is the former Senior Vice President of Products at Google and current advisor to Google CEO, Larry Page. He resigned from his position as SVP in 2011. Alan Eagle is the coauthor of the book and is currently Director of Executive Communications at Google.

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Introduction

One of the reasons for Google's success at innovating is its use of some of the best policies and management practices which set the right climate for innovation. The entrepreneurial spirit is kept in place at this burgeoning organization by dint of its unique culture and management practices. CIO's review makes note of these outstanding practices; rarely exhibited in other organizations in such profusion. Openness and transparency are omnipresent in the business.

In many respects Google's policies and practices are on a 'continuum' in the development of management techniques which began decades ago. In that sense, there are no surprises, but Google's concepts are facilitated by technologies which encourage, or more to the point, demand social interaction, transparency and openness. These technologies did not exist decades ago.

While the concepts are not new, the means of bringing them about are. Speed, quick responsiveness, openness, transparency, communication, humour, smart hiring, deliberate diversions, all make the difference. Not just one practice but all working towards the same objective; innovation.

Some of the highlights from this 'tell all' are as follows.

- Full transparency of people's activities, complete with regular updating of performance information. Manager's own performance reviews open to 'subordinate' staff.
- Board strategic presentations made by product/service experts and shared widely after presentation. No secret documents – with some obvious exceptions.
- Job descriptions/ activities (OKRs) used to bring about alignment within the organization.

¹ a conclusion to be made based on presented facts or information: a main point or key message to be learned or understood from something experienced or observed

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- A focus on thinking big and having in mind the intersection represented by Pasteur’s model .
- A deep sense in the organization that Google is working to better the universe by doing good deeds not ‘evil’.
- Physical office arrangements focusing on crowding, relationships and not hierarchy, with the objective of spurring innovation and effectiveness.
- A process of filtering ideas based on the idea of forming teams with the relevant know how, encouraging collaboration, along with a continual review of potential projects (a long-standing practice at Google) and drawing on input from many sources.
- A functional organization concept to avoid creating ‘silos’.
- A deliberate intention to focus a percentage of product investment into ‘non-legacy’ products.
- Untypical organizational thinking on the number of direct reports – designed to minimize micro managing.
- An extreme emphasis on the use of data for assessing projects and yet, at the same time, going ahead with an idea based on faith that it will be successful commercially, but based on limited financial information.
- Tight idea management at the top and yet the provision of freedom for individuals and groups to take initiatives – if they can secure a buy-in to make up a team.
- More specifically, Googlers think ‘galactically’ and not, according to the authors, as most people think which is ‘incrementally’. Googlers think big. The term ‘smart creative’ is used a lot in the book and its meaning is self-evident.
- Much is known about the famed 20% rule (15% in the case of 3M) wherein employees can devote time to anything they please.

There is a host of good ideas for running a company of engineers. CIO has chosen to focus on those which CIO believes most impact the management of innovation, leaving aside the excellent points made for other activities such as running meetings, e-mail protocol, hiring practices (very good ideas), and even the importance of initiating conversations.

Culture, which includes thinking big and not ‘evil’, is a very large part of Google’s ability to hire talented people and, in turn, to encourage and enable the growth of ideas. Larry Page and Sergey Brin set out to establish a company which was like a ‘university’² with all of the ancillary facilities which these institutions now have. According to the authors of ‘How google Works’,

² As an aside, Arthur D. Little of Cambridge, Massachusetts, was known by many as the University of the private sector. Indeed, ADL had many of the same characteristics as Google – at least until the late 1990s when it declared bankruptcy. ADL had an exemplary reputation for coming up with new ideas in technology and management methodologies which were ground breaking at the time. ADL went bankrupt in the late 1990s probably for a variety of reasons but, let it be said, very much due to their creation of a multitude of profit centres – business units by another name, which led to creation of silos and minimized collaboration in this 3,000-member management and technology consultant firm.

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Google is great because of a combination of strategy, culture and an emphasis on hiring excellence.

More subtly, it is alleged, is that Google has a culture which is well-established and well-understood and therefore becomes the ‘basis of everything’ the company does. Reference is made to the fact that culture ‘is the rails’ of the company and therefore the ‘risks of the going off the rails are minimized’. The authors make a very strong point that when starting the company ‘culture’ was the most important attribute to establish – from the outset. A stagnant, overly “corporate culture” was viewed as ‘anathema’ to the average smart creative. The founders wanted to run a company where ‘everyone gets a say’ and by so establishing the right culture, this almost in itself would attract like-minded people.

The idea of the founders was that the company was not about ‘maximizing the short-term value and marketability of their stock’. Rather, the belief was and is, that the culture of the founders would encourage the brightest individuals to join and that their talents would be ‘instrumental to long-term success’. Bright people, the ‘smart creatives’, could adjust for problems and changing circumstances as they arose. CIO’s research strongly supports the notion of the importance of an early establishment of culture within an organization. Google has done this and, by all accounts, continues to emphasize culture’s importance.

By dissecting the book by topic, CIO provides additional insight and perspective on the subject.

Read ‘takeaways’ by topic

On managing engineers. Why is the issue of ‘engineers’ significant? For Google and the founders in particular, the need is for employees to be steeped in coding and systems design – thus the need for engineers with this training. Managing engineers is different. In Larry’s view, ‘traditional planning structures would not work’. Engineers need to be uniquely empowered – or so the story goes. One needs to understand deeply how the business works. That is the advantage and the inhibitor of progress which engineers bring to any organization. ‘Engineers’, at least most of them, don’t just get into a car to drive it, they have to understand how the engine works, brakes, etc. Understanding coding and systems design, its capabilities and its limitations is the key to understanding the high-tech business.

On organization structure. One of the surprising characteristics of Google is their focus on managing their organization structure and the means by which alignment of corporate vision/views is reinforced. Google’s management practices have been immensely enabled by newer technologies which provide the company with transparency, speed, and ease

‘Takeaways’ by topic

- managing engineers
- organization structure
- hierarchy
- functional organizations
- physical arrangements
- the importance of knowledgeable product development people
- size
- setting up a CIO
- investment in legacy products
- management by objectives
- strategy
- presentations to the Board
- acting on ‘faith’ not data
- Pasteur’s Quadrant
- frequency of meetings

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of communications which one could not have conceived of decades ago at the time when many of these same practices were adopted by the corporate world.

On hierarchy. The ‘rule of seven’ applies; that is to state that each manager should have a minimum of seven direct reports. This is contra to considerable traditional management thinking that there should be no more than seven. The digression from common practice may well be enabled by the use of communications technology which was simply not available when the seven (or six) was initially established decades ago. Whether six or seven, more or less, the notion was to have a flatter organization overall. In Google’s mind, the idea is to not allow the time to ‘micromanage’.

On functional organization. In order to minimize the development of silos, Google believes in being functionally organized; engineering, products, finance and sales reporting to the CEO. Google wishes to avoid the establishment of business units which, in their view, encourage the development of silos.

On physical arrangements. Space arrangements are influenced by the need to create an environment in which the smart creative types are energized. This is accomplished by crowding people together – as in open-office landscaping designs – so interaction takes place.

On the importance of knowledgeable product people. One of the key characteristics of Google is that decision making should be well participated in, if not dominated by, product development people; since they know the insides of what can and cannot be done. Senior level meetings require that at least 50% of people have this experience. Leaders are product people with technical backgrounds! The ‘smart creative’ types are in charge.

On size. Google’s belief is that when a unit gets near the five-hundred-person mark, managers become more risk averse and place emphasis on head count and put the brakes on getting the vacant positions filled.

On not setting up a CIO. Against the recommendations of a well-know (not identified) management consulting firm. Google did not buy into the idea of appointing a CIO czar. This was fashionable for some years. Many companies did. Google’s CIO is the CEO. This is reminiscent of the development and migration of strategic planning within GE and other firms over several decades. While initially the domain of management consultants – their having developed the methodology – the next stage was to appoint a corporate or strategic development group usually at business unit and/or corporate level and later, to inculcate this knowledge directly into line management. Google did not go through these same phases with innovation.

On investment in legacy products. Dictums around the allocation of investment play a role in the management of innovation at Google. Seventy percent of projects, and presumable investments, go on core products, 20% on emerging products and 10% on the unknown with a high-risk component.

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On management by objectives. Perhaps the most surprising organizational tool that Google has put in place, given its penchant for freedom and pitch to the chaotic is the adoption of OKRs. OKRs bear a strong likeness to MBO (management by objectives) of some decades ago; not totally but in their essence.

Each person has an OKR setting out what he/she is working on, reports openly on it weekly, with the whole thing ‘hammered out’. An individual must be able to ‘rattle off their top priorities’ quickly, just like the MBO one used to carry around in their vest pocket but, in this case, kept to themselves and their manager. Beyond OKRs, but clearly a sub-set of the same intent are ‘snippets’; weekly status reports which are quickly prepared, read and shared throughout the organization. A ‘good’ OKR should be a stretch to achieve, or in their words, practically unattainable. ‘If they are all green you aren’t setting them high enough’. As a venture grows the important OKRs move from individuals to teams. By these means ‘OKRs become the most important means to maintain focus on the big tasks’.

On strategy. Googlers talk about platforms; the intersection of buyers and sellers; customers and suppliers. In the high-tech industry, companies think about platforms, not so much products.

On presentations to the Board. The presentation of a strategy at Board level is in the corporate world usually done by the CEO often backed up by his next level of lieutenants. Not the case at Google. Product managers are central figures in these senior level presentations of strategies and annual plans. Google makes a very good point and that is that Boards want to talk about strategy and products not about governance, accounting issues, let alone law suits. This presumes that Board members have some sense of the technology which is driving developments or at least can bring to bear a ‘business’ approach and ask the less than obvious questions of technical people. This may be Google’s Board, but the same comment would not apply to Boards made up of non-product people!

It would appear that there is a certain level of disdain by Google senior management when it comes to traditional strategic planning and even organizational concepts. Google, in CIO’s opinion, operates quite differently than 99% of major companies to the degree to which they have pushed management practices with the use of technology and a philosophy of putting product/service issues to the top of the organizational - senior management and Board - agenda. When referring to a presentation to the Board in 2003, there is a sense of pride in the fact that the plan was not a plan at all. There were no financial projections, no discussion of revenue streams, no market research had been done to support the case presented and no channel strategy

Every quarter the teams prepare an in-depth report on the state of the business for presentation to the Board. After its presentation the report itself (perhaps redacted but this does not seem to occur) and posts it for all to see. An unheard form of communication in most corporations.

On acting on ‘faith’ not data. In referring to the launch of Google’s Instant, there was no financial analysis done, no ROI. They just knew – and they were right – it was such a natural extension of an already good idea; their core product, search optimization. Google does acknowledge that a plan is necessary if for no other reason than to keep people moving in the

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same direction. The preparation of a business plan was, at the time, was resisted by many senior people.

On Pasteur's Quadrant³. Planning sessions at Google appear to be dominated by two topics; technical insight and the use of data. What is the technical insight upon which these new features, products or service will be built? Such a question places the answer right in Pasteur's Quadrant! The use of data brings out those most close to the issues; not, one might say, a management type that does not have first-hand knowledge of the subject.

On frequency of meetings. In developing plans, the emphasis is on holding meetings at frequent intervals so as to avoid the inevitable rehashing which occurs when there are time gaps between meetings, Urgency is imparted.

³ Pasteur's quadrant is a label given to a class of scientific research methods that both seek fundamental understanding of scientific problems, and, at the same time, seek to be eventually beneficial to society. Louis Pasteur's research is thought to exemplify this type of method, which bridges the gap between "basic" and "applied" research. [1] Wikipedia.