The Google way – how they manage innovation – and a comparison with the 'Ideal'; 3M.[1]

What are the best practices for managing innovation in very highly-innovative companies? Google[2], obviously very innovative, has a very unique set of policies and management practices which are very much enabled by the latest technology.

December 24, 2014

Having just finished reading How Google Works written by Eric Schmidt[3] and Jonathan Rosenberg and co-authored with Alan Eagle[4], we are struck by Google's approach to the management of innovation and how technology has enabled the effectiveness of traditional management practices. Beyond these revelations, Google has a plethora of new ideas in how develop strategy and how to manage innovation.

It is Google who brought the world search and other significant innovations but, by way of this book it has brought into play another discussion; valuable information on the best practices for managing an innovative organization.

One cannot help but be impressed with the range and specificity of the practices and policies which have worked out at Google and, presumably, have contributed greatly to their success. Not all of these practices are transportable to other organizations but the fundamentals of the ideas are able to contribute to the advancement of the management of innovation if one is prepared to alter notions regarding intra-corporate communications and particularly trust.

There are a host of good ideas for running a company of engineers in this book. We have chosen to focus on those

Executive Summary at a glance

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.

Our review makes note of these outstanding practices; rarely exhibited in other organizations in such profusion. Openness and transparency are omnipresent in how the business is managed and how it strategizes.

Several of Google's management practices may be over the top and could contribute to dysfunction as this 50,000-employee plus organization grows in complexity.

Our report provides a framework for readers to learn from the practices of this highly-innovative company. Some practices will fit, others may not.

---

[1] CEO Larry Page, allegedly frustrated with the pace of innovation at the company backed away from day-to-day operations and turned over control to Sundar Pichai. Press; December 17, 2014. Sundar is mentioned as one of the 'smart creatives' and, it is noted, taught Jonathan Rosenberg that a good manager sometimes must get out of the way.

[2] See Appendix A for a brief profile of Google.

[3] 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 his leadership, Google dramatically scaled its infrastructure and diversified its product offerings while maintaining a strong culture of innovation.

[4] Alan Eagle is the coauthor of the book and is currently Director of Executive Communications at Google.

which we believe 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. Not that these are unimportant, as in their handling these practices are symbiotic with our topic. You can negatively impact a culture very quickly by sending out an inappropriate e-mail!

In many respects Google's policies and practices are on a 'continuum' of development of management techniques which began decades ago. In that sense, there are no surprises. On the other hand, 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. 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.

Our purpose is to identify management traits, policies and management practices, which are common to highly-regarded companies and by so doing provide a framework – which we call a generic model[5] – for others to examine and adopt those practices which will improve their own management of innovation.

Executive Summary

Google is not on Forbes nor Fortunes list of the top innovative companies in the world. It is 52nd in rank amongst the world's biggest public companies; not bad for starting in 1998 and going public in 2004. It is 3rd on Fortune's Most Admired companies in 2014 after, guess who, Amazon and Apple. Over the decade, revenues have increased from $3.2 billion to $60 billion in 2013 and are forecast to grow[6] to $78 in fiscal 2015.

Table of Contents

Almost all the news about Google's innovation successes is positive except for some stagnation in its stock price (relative to expectations). Its product portfolio is amongst the most exciting of any company in the world. Staff numbers

---

[5] See later in this research report.
[6] Value line as of November 14, 2014.

approximate 50,000 and the company operates in 40 countries[7]. In a decade it has emerged as one of the most innovative companies globally.

How has this happened? Leadership, a very unique style in the corporate world, the adoption of best practices, and smarts are obviously major contributing factors. Financial results are, however, not up to expectations.

In the book How Google Works[8] the authors go out of their way to explain their approach to management. There is much to learn from their candid communication.

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

- Full transparency of peoples 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.

- A focus on thinking big and having in mind the intersection represented by Pasteur's model[9] .

- 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.

---

[7] Recent withdrawals from China and Russia, for different reasons in each case, have somewhat reduced their global footprint.

[8] How Google Works authored by Eric Schmidt and Johnathan Rosenberg with Alan Eagle.

[9] 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.

- 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.

Google faces some challenges typical of innovative companies in a growth spurt. While hugely embracing of innovation and brimming with innovative ideas, many of the idea *interests* may take time to come to commercial fruition. Stock performance has not kept pace with aspirations. Departures, such as the exit of Nikesh Arora[10] to Softbank and restructurings – Larry Page backing off day-to-day management in favor of 'smart creative' Sundar Pichai, could foretell some future management problems. Google is facing off against Facebook as a competitor for its core business, search, as well as in the area of video-feeds.

The organization structure, management policies and practices, may require significant modification to match the needs of what is now a very large and diversified company. With Larry Page backing away from day-to-day operations management and turning this over to Sundar Pichai, there will be some changes. As an ex McKinsey consultant and with his experience at Google since 2004, where he led the product management and innovation efforts for many products including Chrome and OS and was heavily involved in Drive, Sundar may bring a more classic approach to management but, at the same time, does not negatively impact Google's unique and believed-in culture.

---

[10] Nikesh Arora, it is reported, reorganized Google's business organization in 2012. The plan was implemented in just few weeks and it was an attempt to put in place "One Google" that would return the company's focus to the customer. This is an example of Google's bias for action - adjustments were made after the initial organization was put in place.

## **Comparative financial results for Google**

While Google is viewed as a highly innovative company, its shareholder returns in the recent three years has not been exceptional.

We provide research into a small group of highly-innovative companies; Deere, GE, Starbucks, P&G, 3M and, some time ago, Blackberry – then RIM. Other more limited coverage includes HP, Nucor, DSM, Koch Industries and Apple while under Jobs. 3M, as well as GE, were both included in the original research[11] which led to the establishment of this web site. Reports on this small group of five companies are available under the banner 'CIOMAX'.

Three companies within this group of five are highly diversified; GE, 3M, and P&G; two diversified by products/services into a large number of industrial markets and the other focused on 'consumer' markets. While no less daunting to manage, Starbucks and Deere & Co. are less diversified. This report on Google represents our first effort at reviewing the management practices of a 'hi-tech' company and is based entirely on publically-available information.

Google is now a $68 billion company in terms of revenue[12], a market cap of $350 billion, with over 50, 000 (51,564) employees operating in 40 countries. They have diversified from internet search into video and other forms of digital marketing. A brief profile of Google is set out in Appendix A.

Google went public in 2004 with a share price of $85. While revenue growth and EPS have increased, share price has not kept pace. The chart opposite is based on average share price over each year against reported revenue and EPS increase for years up to 2013 and a forecast[13] for 2014 using 2006 as the base year for comparison purposes.


Relative increases since 2006

.

---
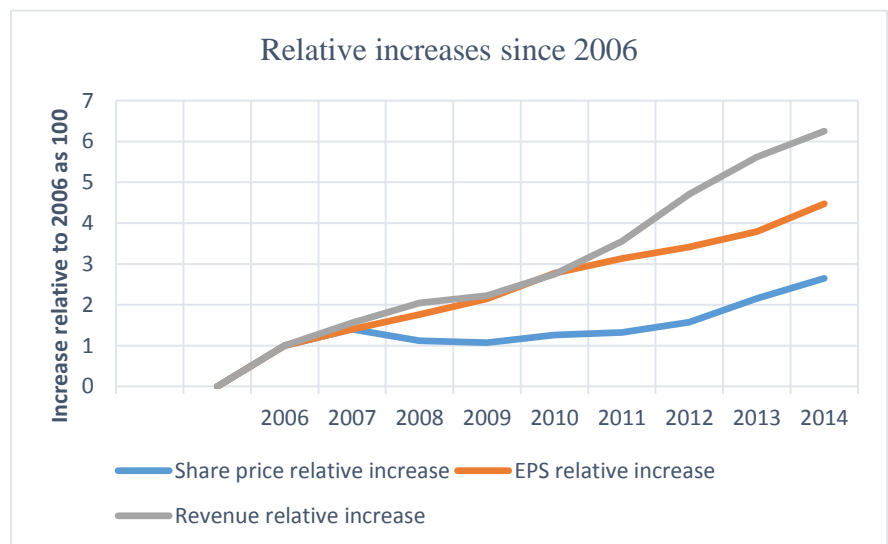
[11] See http://www.corporateinnovationonline.com/about-us/original-research/
[12] Source; Yahoo Canada
[13] Valueline forecast, November, 2014

Google's 'P/E cluster' appears to have settled in around the 25 to 30 level – at least until there is more positive indication of a major increase in the revenue stream that might be occasioned by a new product or service. Current[14] P/E ratio (ttm) is 27.

Google's P/E ratio, since 2006, is comparable to that of Starbucks, having much to do with expectations for growth in revenue and profit based on historic performance and the optimism associated with future developments. Starbucks, in our view, is much less diversified than Google, is tightly controlled from the top, and is a simpler business model than Google. In many respects the Starbucks innovation management model is the opposite of Google's but none-the-less very successful.
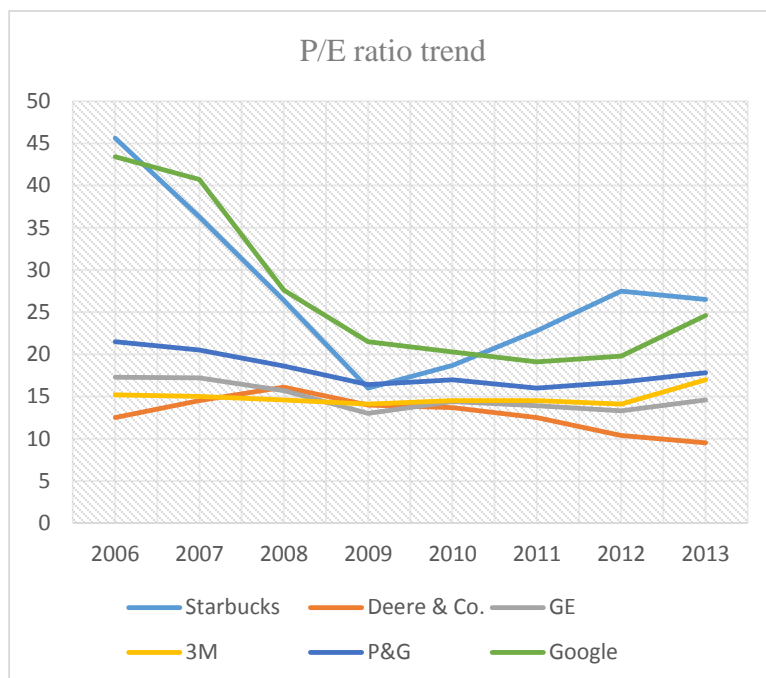
From the 'market' viewpoint, it is much less about how one manages than it is about achieving financial results which may or may not support the stock price. In both cases the importance of continuning year-over-year revenue growth seems the dominant driver of stock price.

The chart opposite illustrates a relationship between revenue growth year-over-year and P/E ratio over the period 2006 to 2012. In spite of a decline in the annual rate of revenue growth in 2012 and 2013, the P/E ratio has increased.
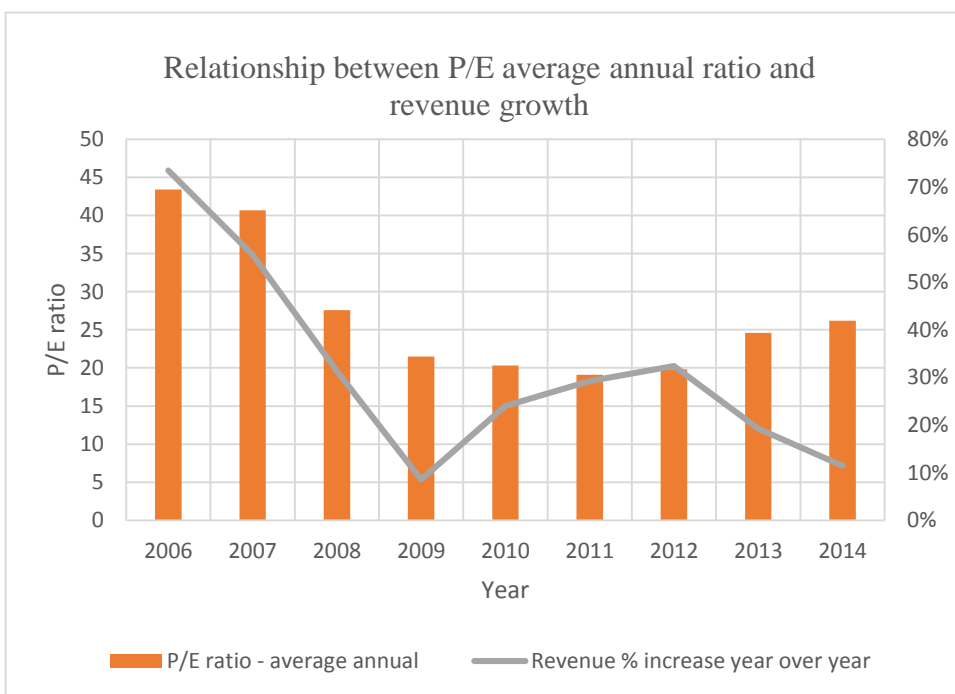
Average annual return on capital for Google is portrayed alongside our 'group of five' highly-innovative companies. While all six companies can be viewed as being innovative, the three that standout, at least by this measure of performance, are 3M, Deere & Co. and Starbucks. Google and P&G tie for second place and GE comes last.

Average annual return on capital
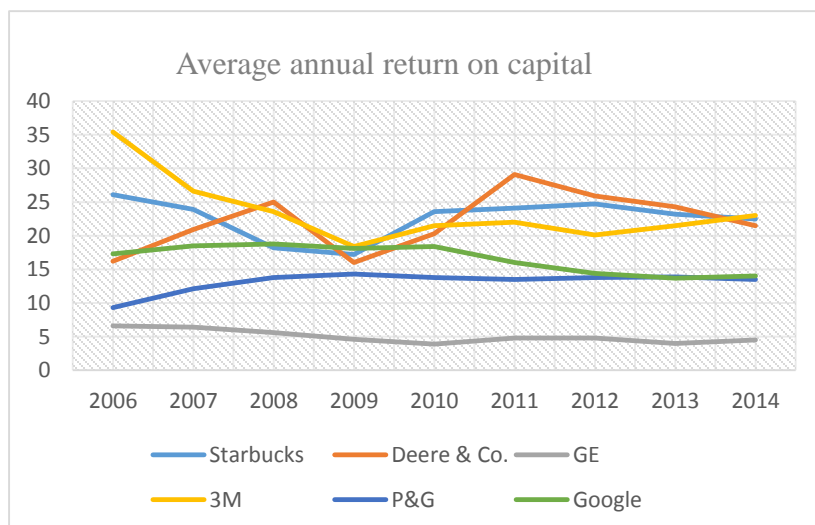
As an aside to this research report, but made note of in our 'CIOMAX' report on Starbucks[15], we plotted the correlation of revenue increase year-over-year through the period 2005 to 2013 with Starbucks P/E ratio and found some consistency.

That same type of analysis for Google is shown in the chart opposite. 'Markets' augment the P/E ratio where there is, or there is about to take place, obvious growth in revenues. Current quarterly revenue growth is 20.10% so, it could be argued, that a P/E ratio of around 25 could be expected for Google at this time. Should the decline in the rate of increase in revenue for Google persist, the P/E ratio would not likely remain at current levels.

Google; Correlation between revenue growth - year to year - and P/E ratio (annual average)

[15] Available at http://www.corporateinnovationonline.com
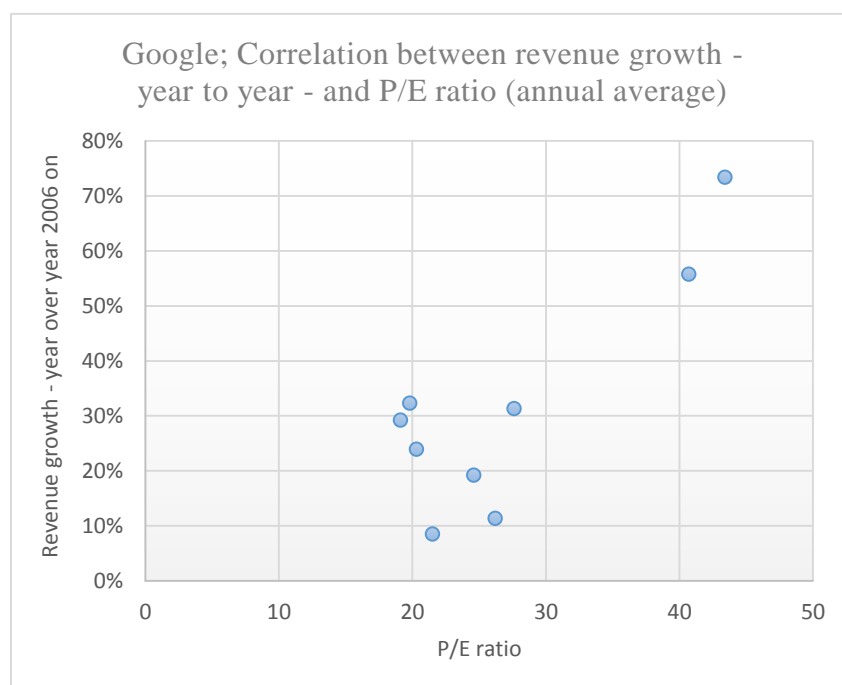
Diversification requires a flexibility in management given the greater market differences and customer needs than is required in singularly-focused organizations. 3M has done much better than other 'diversified' companies in this small group. Might 3M's culture, policies and management practices still be the best when it comes to managing a very large and diversified enterprise? Might Google learn from 3M? We think so.

Google, 3M and Deere & Co., have a degree of diversity much different from that of Starbucks.

Diversity brings challenges to management as might be illustrated by looking at the average annual return on capital compared with the number of employees.

3M has a stellar record whereas GE has yet to get its act together with respect to financial returns. Deere & Co. and Starbucks, the less diversified companies demonstrate better returns on total capital.

Note that two companies; Starbucks and Google are much 'newer' than the other four companies and may

Correlation between number of employees and average annual return on captial - 2006 on

Employees - 2013 — Average annual RonC

not have built up the hierarchies and bureaucracy that often come with time and growth. On the other hand, newer companies may simply be much more aware of a looming problem in management and take steps to minimize the onset of the hardening of the arteries; often manifesting itself in slow decision making, and inadequate communications. Only time will tell.

Google has 51,000 people but its rate of growth when compared to the 'basket' of five companies has been phenomenal. With 88,000 employees at 3M and a very solid average annual return on capital, is there an indication that up to 100,000 is manageable but above that level, for a variety of reasons, the task of managing becomes very challenging. Deere & Co., has 67,000 employees. Starbucks with its 10,000 or 20,000 stores around the world is not a good comparison given its different business model and the replication of skill sets within the large number. P&G has 121,000 people and GE has 305,000 people.

From all reports[16] GE and P&G have made it clear that amongst their strategic objectives is the need to go for 'simplicity' in an effort to instill entrepreneurship and innovation in their organizations. 'Simplicity' can mean many things but it certainly infers a need for delegation and decentralization in some form in order to speed up and make more effective corporate decisions as well as taking risks. In comparison to these large enterprises, it is very clear that Google is adventurous and takes risks.

---
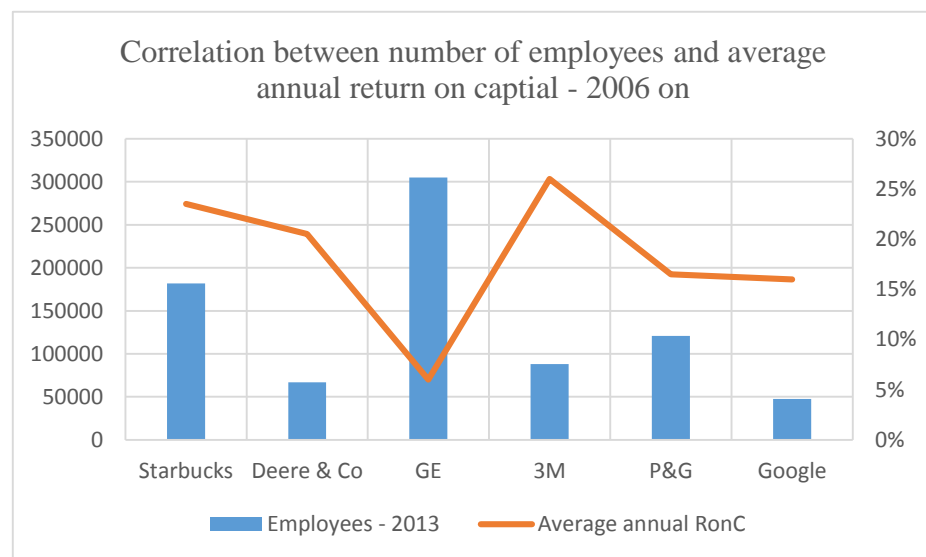
[16] See CIOMAX reports on GE and P&G.

Google's own take on reasons for success

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[17] and Sergey Brin set out to establish a company which was similar to a 'university[18]' with all of the ancillary facilities which these institutions now have.

Google's founders and the subsequent management, a total span of 16 years and therefore not a long history certainly as compared to other companies which we have researched, have a clear vision of what their company is about and where it is heading. According to the authors of 'How google Works', Google is great because of a combination of strategy, culture and an emphasis on hiring excellence.

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.

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[19] 'is the rails' of the company and because of it the 'risks of the going off the rails are minimized'.

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.

The authors[20] 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. Our research strongly supports the notion of the importance of an

---

[17] Larry Page is the co-founder of Google with Sergey Brin. Page succeeded Eric Schmidt in April or 2011. Page ran Google as co-President along with Brin until 2001 when they hired Eric Schmidt as Chairman and CEO. Page in on the Board of Google.

[18] 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.

[19] See Appendix A for Google's own statement on their culture.

[20] 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.

early establishment of culture within an organization. Google has done this and, by all accounts, continues to emphasize culture's importance.

No doubt about it, from the founders' concepts to many if not all of the people working at Google, the notion is that the technology of the internet has the power to change the world for the better. There are very few, if any organizations in the world, which have this combination of a 'galactic' view, openness and transparency and a set of policies and management practices which reinforce their concept of the company.

Organization and strategy at Google

Google has a unique set of guiding principles by which it organizes and strategizes its business. Many of these have been immensely enabled by new technologies.

Having best practices in place does not necessarily guarantee above-average financial performance nor a heightened stock price at any given time but ultimately should result in better performance when compared to others in the same industry sector.

Strategy, policies, and climate and culture all need to be in place for innovation's potential to be released.

- Strategy is the science and art of using the resources of the business to execute approved plans as effectively as possible.
- Management practices is to do, or perform habitually, customarily, in order to acquire or polish a skill.
- Policies; a plan or course of action, as in a business, and intended to influence and determine decisions and actions.
- Innovation Climate and Culture; a prevailing condition or set of attitudes in human affairs; behavior patterns and beliefs.

Whereas 3M's policies, its innovation climate and culture have developed over many years, Google's history goes back only to 1998. Starbucks, also, is a much newer entry when compared to the other four companies.

Google, as a high-tech company, while a different company than all five companies in our 'basket', but it is not as different from two other companies which we have researched; Apple under Jobs and RIM, while under Lazaridis and Balsillie. All three of these companies are very much in the hi-tech sector and employ large numbers of engineers and scientists.

According to the authors, at least half of Google employees should be engineers. Lazaridis, when he was at RIM, was alleged to have favored engineers in terms of his interest and project funding

allocations. There are distinct similarities between Google and RIM, particularly in the functioning of their upper management, but this is not the topic of this report.

Why is the issue of 'engineers' significant? For Google overall and the founders in particular, the need is for employees 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.

Organization
Google's approach to organization upturns many traditional beliefs but, at the same time, draws on the best of earlier-developed management practices.

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 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.

Much is known about the famed 20% rule[21] (15% in the case of 3M) wherein employees can devote the time to anything they please, but 3M has had essentially this rule for decades. But the use of a 20% rule is only the beginning of Google's inventory of best practices.

Some of the key characteristics of their approach to organization and strategy bear noting.

- 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 (this is in my own experience was six) direct reports. 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 many years 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'.

- 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.

- Physical 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

---

[21] Google is confident that the results from this 'rule' totally validate its use.

open-office landscaping designs – so they can interact with others.

- 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.

- Organization structure focusses on relationships and not on hierarchy.

- A philosophy of size comes into play. Google's belief is that when a unit gets near the 500 person mark, managers become more risk averse and place emphasis on head count and put the brakes on getting the vacant positions filled.

- Philosophy comes into play again when the subject is 'innovation'. 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 some years ago. 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.

- 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.

- 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'.

Google has a well-organized set of policies and management practices which bear significant resemblance to practices of the 1960s but are much more transparent and fast than anyone could

conceive of in that early period. Alignment has always been an issue in large organizations and Google has, with the use of new technology, addressed this in a most effective manner.

Strategy
Strategy development and communication have some new twists which other organizations might well adopt

Strategy development is another area where Google has adopted some interesting approaches.

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

- 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 our 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.

    o There were no financial projections
    o No discussion of revenue streams
    o No market research had been done to support the case presented
    o No channel strategy

  Faith had to be a big part of the 'no plan'. 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 same direction. The preparation of a business plan was, at the time, resisted by many senior people.

- 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.

- 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.

- 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 of form of communication in most corporations.

Management of innovation at Google

Google has a great set of policies and management practices which are conducive to innovation excellence but might some of these practices be over the top and eventually contribute to organizational dysfunction?

For purposes of reporting on the management of innovation at Google, we have grouped twenty-five Factors – see Appendix B - which impact innovation, under three headings.

- Leadership
- Organization and management of day-to-day affairs
- Idea generation and realization.

The purpose of reporting in this manner is to provide the reader with a framework which can be relatively easily applied, if the desire is there, to their own organization.

We have some independent verification of our own ratings by way of contributions to our on-line survey and these are reported upon for each Factor. This survey ask respondents to provide their opinion on what value they would put on each Factor and then to rate their own 'Reality', the difference between the two ratings provides some insight into the degree of satisfaction or dissatisfaction of the responder. These opinions are set out in the comparisons made with our ratings for both Google and our "Ideal'; 3M.

Leadership Factors

Six Factors are used to probe and measure leadership's role in the management of innovation.

> **Leadership Factors**
> - *Emphasis on short versus longer-term profits – F#1*
> - *Extent to which management explicitly looks for innovation – F#2*
> - *Planning emphasizes opportunities and not just cost reduction – F#4*
> - *Use of career ladders and recognition of innovators – F#7*
> - *Tolerance for risk in the planning process – F#9*
> - *Attitudes towards merger, acquisition, joint ventures, and divestiture – F#16.*

Opinions on whether management places an undue emphasis on the need for short-term profits is one of the Factors that needs examination. If the message from the Board or management is that quarterly profits are most important then there is little room for people to think too far ahead or expect that funds for new ventures, however appealing, will materialize. There is need for management to convey a balance between short-term and longer-term profit motives; to make the trade-offs.

Surprisingly, some management's do not call for innovation and this could even be appropriate in certain circumstances. But if the latent desire of the organizations' employees (and stakeholders let alone shareholders) is to be innovative, then there is disconnect between top management, always including the Board even if this function is nothing more than a 'rubber stamp' for CEO initiatives.

Our research indicates clearly that risk taking is, at all levels, a feature of highly-innovative companies. Without risk there can be no innovation.

Companies such as 3M, P&G, and John Deere make a point of singling out those who are innovators in the company and providing rewards, not always monetary, for exceptional performance.

In the table noted, we have rated Google in comparison to 3M's rating and also provided the opinion of respondents to our on-line survey[22]for the same Factors. Not surprisingly, registrants are less demanding than are the ratings for the other two companies.

It is absolutely clear that Google has a rating which, while close to 3M, is even higher in the case of Factor #1 and #2. Google's decision making with regard to profits focus is, according to the latest information, somewhat scattered but the indication is that its view on profits can be very much affected by the latest best idea. From a management perspective, in this case, the lower

rating for 3M provides more stability by being more conservative than is the case for Google. Innovation - #2 – is much more of a value at Google, innovation epitomizes the nature of the company, at least at this point in its maturity.

Leadership Factors	3M rating – our 'Ideal'	On-line survey respondents' 'Ideal'	W&P rating for Google
1. Management's emphasis is on short-term versus long-term profit.	3	2.2	4
2. Management explicitly looks for or has no interest in innovation.	-4	-0.5	-5
4. Planning emphasizes rationing resources or identifying opportunities.	No info.	2.9	4
6. Leaders emphasize management of people and their interactions or not.	5	3.3	5
9. Management's tolerance for uncertainty (as distinct from risk) in the planning process or not.	No info	1.6	4
16. Management has an open and relaxed attitude towards acquisitions, joint ventures and divestitures.	-4	Data?	-4

We gave equal weight to each company's focus on people management - #6 and for #16, the attitude to structural changes brought about by asset moves.

Google has a very high tolerance to the assumption of risk – F#9 – and we do not have a similar rating for 3M.

---

[22] For the on-line survey go to http//www.corporateinnovationonline.com

Organization and management of day-to-day Factors

Seven Factors address how management goes about organizing and managing routinely and how these practices impact a company's innovativeness.

These Factors have much to do with people management, internal communication, delegation of responsibility, accountability, and reporting; i.e. management practices issues which are well recognized.

Google has some exemplary practices which are well set out in the latest book.

<div style="border: 1px solid blue;">

Organization and management of day-to-day affairs Factors

- *Degree of formal communications in the organization – F#10*
- *Use of independent work groups – F#11*
- *Management decisions with input from a broad cross section of employees – F#12*
- *Formality of the decision process – F#13*
- *Planning versus action orientation – F#15*
- *Decentralization versus centralized hierarchy – F#18*
- *Staff versus line involvement in the decision process – F#20*

</div>

The question is, however, how all of these practices are actually viewed by employees. Is there a consistency of viewpoint or are there disconnects which could inhibit innovation? Are the views of employees in line with those of senior management and the Board? If not, why not? The sense is that there is alignment within the organization and this is brought about by best practices in communication, openness and transparency.

Seldom have we reviewed an organization which so emphasizes its approach to important best practices; communications, openness, transparency, and shared decision making.

Other examples which have been researched include; John Deere, 3M, Starbucks, Nucor, and Toyota. The pattern is clear. People come first. A degree of informality in communications and decision making is called for as is the delegation of responsibility, authority and accountability. These are essential elements in innovative companies. A balance between shooting from the hip and planning paralysis is also seen as a desired management practice.

Organization and management of day-to-day affairs Factors	3M	Survey respondents' 'Ideal'	W&P rating for Google
10. The style of communication within the organization.	-5	-1.01	-5
11. Management's discourages or encourages use of independent work groups for special purposes.	-5	-1.59	-5
12. Management makes decisions with lots of input from the rest of the corporation or not.	5	2.47	5
13. Decision process is elaborate and formal versus short and informal.	-1	0.38	-3
15. The organization is planning-oriented versus action-oriented.	No info.	-0.24	3
18. The organization has a decentralized or centralized hierarchy.	-4	-0.86	-5
20. Staff versus line involvement in the decision process.	No info.	Data?	Not even relevant

For Google all of these characteristics seem embedded in their normal operations. In the table noted, we rate Google the same as 3M for Factors #10, #11, and #12 and give the nod to even its better practices than 3M for Factors #13 and #18. Factor #15, the bias for action is not able to be compared to 3M for lack of data from that company but the rating for Google reflects what is known about their bias; and it is generally positive. There are examples which suggest that the bias may have been stretched too far – i.e. more hip shooting than analysis, and this to the extreme can become a concern moving forward.

Communication is a priority for Google. The two founders emphasised the need to keep everyone up to date on developments company-wide. This fostered alignment from top to bottom. Longer-range planning was communicated by way of a spreadsheet listing by rank the top 100 projects which had been selected and were to be the focus of the company efforts at least until the next list was communicated. The list even set out "new/far out" and "skunkworks" projects for all to see. Probably unprecedented in the corporate world since many of these projects, if they were in other organizations, would have been construed as being top secret. By contrast Google makes a point of avoiding secret documents wherever possible.

If these actions were not enough to maximize communications, there is a recognized need to take 'high-profile' steps to promote transparency across divisions.

Project lists were so significant that they replaced, apparently, any need for long range planning. The list was it! Traditional approaches to strategic planning were not viewed favorably by the founders but were prepared for purposes of satisfying the Board. Business plans, as it were, were not documents which were seem to inspire people to join, not did they inspire those already with Google.

The decision process – reference Factor #13 – was designed to be different than the traditional approach in many corporations. No command-control system where data flows up and decisions came down was to be tolerated. Such an approach would only slow decision making down. Short and informal decision making was and may still be the choice of the day.

An interesting feature, which seems contrary to the founders hopes is that notes were taken, evidently each day or close to it, of the way in which the company managed itself. Even here, Google believed that they were experimenting with management approaches and documenting the results for all to see[23].

Google demonstrates a 'bias for action' – F#15 - which is completely consistent with its philosophy of hiring the smart creative. Bright people will catch on quickly and where there is a problem will adjust accordingly. One does not hire people so much for the particular job at hand as for the job that as yet cannot be defined. As Peters[24] has pointed out, the bias promotes the idea of trying something out but then correcting for deficiencies or better ideas.

Decentralization is the watch word at Google. Interestingly this is, in our opinion, the characteristic which differentiates and speaks to the exemplary 3M's policies and management practices from the other four companies in our 'basket'.

In another illustration of practices which, are not new ideas, but are seldom done, is the preparation of a report by each person – must be a 'manager' – writes an appraisal of his/her own performance and shares it with the group.

---

[23] This may not be so surprising given the Russian background at the top level of Google. If you have ever worked in Russia and have been asked for and delivered a set of 'good' recommendations to a client, the typical response is that the client will agree with the recommendation but will bring it about in the 'Russian way'; which cannot be defined.

[24] Peters; In Search of Excellence.

Idea generation and realization Factors

Seven Factors, mainly comprised of attitudes and decisions by management are seen to impact the flow of ideas in an organization.

For those companies which place a priority on innovativeness, it is clear that some notion of how ideas develop and are implemented within an organization should be well understood by all employees. Recent software developments are facilitating the means of capturing and managing ideas through to implementation. This is further evidence of the importance of 'idea management' to many companies.

Idea generation and realization Factors

- *Tolerance for mavericks – F#3*
- *Tolerance for failure – F#5*
- *Corporation provides career ladders, powers and titles for innovators – or not – F#7*
- *Tolerance for variation from a corporate norm – F#8*
- *Mechanisms in place to reward innovators – F#14*
- *Resources generally available for new ventures – F#19*
- *R&D budget levels above the competition – F#23*

Tolerance plays a big part in this process. Tolerance for failure, tolerance for mavericks, and different values and ways of exhibiting tolerance is an important attribute of those companies which we have researched.

Often it is difficult for senior management to get an objective handle on these important Factors since the opinions are very much a subjective judgment and not easily rendered in an otherwise open and transparent corporation.

None-the-less, employee's opinions on several of these Factors can be game-stoppers when it comes to surfacing ideas.

While product-inspired innovation is much impacted by spending on R&D, as noted earlier, the effectiveness of spending is equally if not more important. Again a value judgment!

Idea generation and realization Factors	3M	Survey respondents' 'Ideal'	W&P rating for Google
3. Management's has tolerance for mavericks or not.	-5	-1.25	-5
5. Management's tolerance for failure or not.	-4	-0.51	-5
7. Corporation provides career ladders, powers and titles for innovators or not.	4	2.24	5
8. Corporation is tolerant towards variances from the corporate norm or not.	-4	-0.74	-5
14. The corporation has specific mechanisms available for rewarding innovation or not.	-5	-1.54	-5
19. Resources (budget, personnel, time, etc.) are generally available for new ventures or not.	4	2.61	5
23. The R&D budget is less or more than the competition.	5	1.89	5

Innovativeness is composed of a broad spectrum of initiatives from science-based ideas to what could be referred to as 'suggestion-box' ideas; just good ideas for improving productivity – so valuable to the process of continuous improvement. Idea generation is not limited to spending on R&D.

In the table noted, Google is rated similar to 3M for Factors #3, #14, and #23. Google is given a higher rating for Factors #5, #7, #8, and #19. While not now dissimilar in size to 3M, 3M has been around for over 100 years. Google's challenge is to maintain these entrepreneurial characteristics just as 3M has done over its history.

Google makes a point of its acceptance of people – F#3 - most would regard as 'odd'. In our on-line survey we refer to these people as mavericks, a name bestowed on some people at 3M. This

characteristic is a positive contributing force behind innovation, not an inhibitor. Google's tolerance is however confined to what are referred to as mavericks not knaves. Divas should be 'tolerated' and 'even protected'. Relatively few companies make this as importantly apparent as Google. GE does not nor does Deere & Co.; two examples from the list of companies which we have researched.

Part of the encouragement of idea flow in an organization is how management in particular go about dealing with inevitable failures; F#5. No failure means for most that innovation is not happening. Failure is the consequence of attempting new things. In Google, when 'Wave' failed no one lost their job – all were eventually employed elsewhere in the organization.

Reference is made that for a meritocracy to work the culture makes way for an 'obligation' to dissent. Highly reminiscent of the university environment! Cultural norms – F#8 – is simply not on.

Rewards are always an issue when it comes to innovation F#14. Google is clear that 'exceptional people deserve exceptional pay'. This has also been our finding from researching the several companies on our list. Deere & Co., GE, and 3M makes this same point. An important exception to this adage is that those who work on the '20% projects', these being the far out by nature, are not rewarded monetarily as, in Google's opinion, the work itself is the reward. IBM and 3M are known for their signalling out important innovation contributions through using non-monetary rewards such as titles, appointments, sabbaticals or more responsibility. Google authors point out that in large corporations, the practice is that individuals are not rewarded for taking risks but are penalized for failure. That is not the practice found in any of the companies which we have researched.

As to ensuring that people believe that good ideas will attract company investment – F#19 – the emphasis for moving ideas ahead is to establish a team on the basis that management cannot possibly be omnipresent for judging all new proposals. There are too many projects and too few ways to get all individuals ideas to the surface. The formation of a team implicitly means that an idea has attracted a number of people and they cannot all be wrong. The filter for ideas is the formation of the team itself. As is pointed out, the challenge of assembling a team in a non-hierarchical company is a major challenge.

Invoking Pasteur's Quadrant is particularly interesting. Google believes and wants to work at the edges of fundamental science in whatever form that takes. It is not leaving this fundamentality to universities nor research centres as so many other organizations have. The challenge is to grapple with ideas no matter from what the source. Links to the sources of ideas which originate not from within Google's competitors but from without is the key thinking here. Google does not obsess about the R&D spending of the competition - F#23 – as it does about the idea itself.
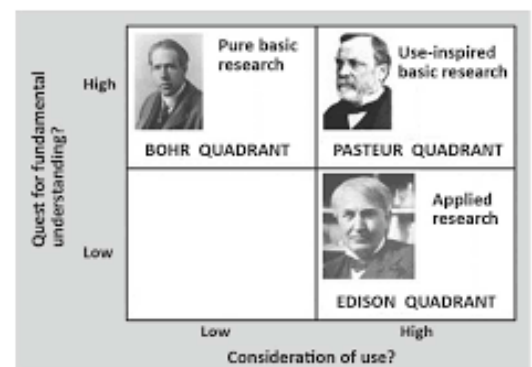
Summary; Management of innovation at Google

Three Factors are left to be examined

F#21, whether innovators stay with the organization or leave for greener pastures or to set up their own business. There have been some high level departures from Google and some of these have gone on to spectacular successes in starting up their own business. The general impression is that, for the most part, innovators stay with Google.

F#22, whether the organization has or has not an innovative tradition and F#24, whether the organization's innovation is seen to increasing or decreasing. These, in our jargon, are referred to as 'outcomes' and rather than measuring what is done, the notion is to identify the results of either good or ineffective innovation practices.

Google ranks very highly in each of these three Factors, of this there is no doubt, no possible doubt whatever.

Our overall rating for Google is set out in Appendix C.

Building a generic model for the management of innovation

White & Partners, with a view to sharing successful policies and management practices with interested readers, is in the process of developing a generic model for the management of innovation. Which are the policies and management practices common to highly-innovative companies? Google's practices add to this model.

Our model is based on the hypothesis that effective management of innovation, gives rise to better-than-average financial performance which in turn results in increased earnings and ultimately an increase in stock price, albeit impacted by the whims and vagaries of the market as a whole and the overall economy.

Five characteristics – see chart - stand out as very important in the management of innovation. The first is that the culture – a vague concept at best – needs to reflect an interest, a passion for innovation. Parsing 'culture' is one of the challenges.

Common to most of the companies which we have researched is the presence of a solid approach to financial management and a system of managing people; i.e. providing the needed incentives and style which contribute to a climate – a culture – where innovation thrives. Communications, technology investment and the final main characteristic of successful innovation is the strategy adopted by the management team and the Board.

These characteristics are set out in the following chart. Its simplicity belies the difficulty of making it happen!

- Culture
- Financial and human resource management
- Communications intra-company
- Technology investment
- Strategy/organization

Effective management of innovation

Financial performance

- Growth
- Profit
- Reliable products/services

- Earnings
- P/E ratio

Stock price
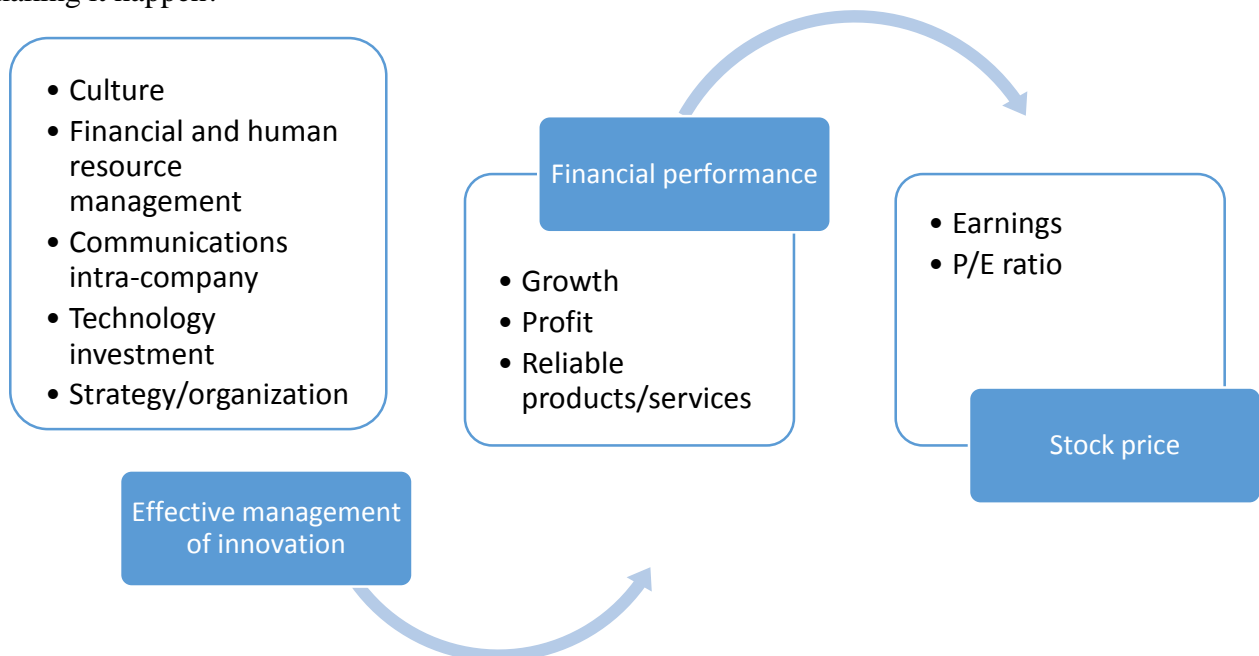
The six components, since we have added in the need to make reliable products/services, of the business model for effective management of innovation – as it has been developed so far - are as follows.

Six components of a model for the successful management of innovation
1. **Performance management** 2. **Communication** 3. **Reliability** 4. **Technology development** 5. **Culture** 6. **Strategy and organization**

Performance management
- **Strong financial performance** provides the company with a sense that its financial house is in order and that investment decisions, while satisfying clearly-stated and understood criteria will be seriously considered for investment.

- **A system of managing human resources** which aligns individuals with the corporate goals, measures individual and group performance, and provides fully transparent team-based rewards throughout the organization. *(F#6[25]). (F#14).*

Communication
- A focus on **regular communication of corporate policies and management practices**, appointments and matters impacting individuals and groups within the organization. Making people constantly aware of new developments in the 'how' of management. *(F#10).*

- A company which values **broadly-based input into decision making** and values speed but not over careful evaluation of opportunities and risks *(F#12).*

- Cohesion **and a commonly-held vision of the future** is facilitated by meetings/gatherings of senior managers at key points in the development of the company. *(F#10).*

Reliability
- The outward exhibition of delivering what is says it will deliver to customers thus **building a sense of trust between company and customer**.

- The **delivery of reliable products** – products which perform under all likely situations.

Technology development
- A consistency in the **company's spending and approach to spending on R&D**. People like to work for an organization which has a reputation for its ideas, its innovations. Spending is an indicator of this commitment. *(F#23).*

- **Maintaining a watch on developments at the customer level** and overall **end-user** and carefully noting the demographic and economic shifts which eventually impact product/service demand. *(F#4).*

---

[25] The F# in parentheses refers to the Factors set out in Appendix B.

- Continually **monitoring competitor developments** and understanding the competitive situation globally.

- **Investing in new products/services** and less so in 'legacy' products. *(F#2).*

Culture
- **Tight centralized financial management with maximum decentralization and looseness** throughout the organization. *(F#18).*

- A healthy regard for the **impact of culture on acquisition/divestiture practices** – making *culture* an element of the criteria for any potential acquisition. *(F#16).*

- A **healthy respect for traditions** and even folklore.

Strategy and organization
- Ensuring that **industry knowledge and its complexity are well understood by a percentage of the Board of directors**. The term[26] 'adaptive Board' is relevant.

- Suitable **succession planning** – a Board responsibility.

- **Continuity and longevity** of senior management.

- **A Board and CEO perspectives on both the short and long-term**; achieving a balance in major decision making. *(F#1).*

- Making acquisitions which are essential to technology or market growth but where **culture is an important part** in the evaluation process.

- At ease with **adapting ideas from outside the organization** through acquisitions or through mid-career hires.
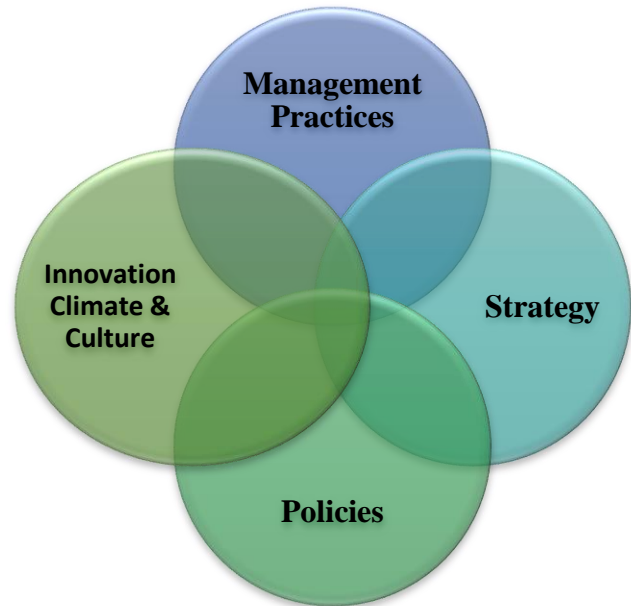
The generic model is set out in table form in Appendix D with a summary comparison with 3M's rating and a place to provide your own opinion as to whether your organization meets the characteristics provided.

---

[26] Drawn from the study of Nortel failure.

Appendix A
Summary profile of Google Inc.

Our culture

It's really the people that make Google the kind of company it is. We hire people who are smart and determined, and we favor ability over experience. Although Googlers share common goals and visions for the company, we hail from all walks of life and speak dozens of languages, reflecting the global audience that we serve. And when not at work, Googlers pursue interests ranging from cycling to beekeeping, from frisbee to foxtrot.

We strive to maintain the open culture often associated with start-ups, in which everyone is a hands-on contributor and feels comfortable sharing ideas and opinions. In our weekly all-hands ("TGIF") meetings—not to mention over email or in the cafe—Googlers ask questions directly to Larry, Sergey and other execs about any number of company issues. Our offices and cafes are designed to encourage interactions between Googlers within and across teams, and to spark conversation about work as well as play.

"Ten Things"

Googles own pronouncements about its culture is enlightening.
Google's "ten things"[27].

1. Focus on the user
2. Best to do one thing really, really well
3. Fast is better than slow
4. Democracy on the web works
5. You don't need to be at your desk to need an answer
6. You can make money without doing evil
7. There is always more information out there
8. The need for information crosses all borders
9. You can be serious with a suit
10. Great just isn't good enough

Profiles

Mr. Eric E. Schmidt Ph.D., 59
Exec. Chairman, Chairman of Exec. Committee and Chairman of Acquisition Committee

Dr. Lawrence Page, 41
Co-Founder, Chief Exec. officer, Director, Member of Acquisition Committee and Member of Exec. Committee

Mr. Sergey Brin, 40
Co-Founder, Director, Member of Acquisition Committee and Member of Exec. Committee

---

[27] https://www.google.ca/about/company/philosophy/

Valueline
Google profile; Value line, November 14, 2014

BUSINESS: Google Inc. operates the world's leading Internet search engine. The company derives revenues primarily through delivering targeted advertising.

Revenues are also derived from the licensing of search technology and solutions to enterprises. Revenues in 2013: United States, 45%; International, 55%. Has 47,756 employees. Officers & directors own less than 1% of Class A common stock, 94.1% of Class B; Fidelity, 7.0% of Class A; BlackRock, 5.7% of Class A (4/14 Proxy).

Executive Chairman: Dr. Eric Schmidt. Co-founder & Chief Executive Officer: Larry Page. Cofounder: Sergey Brin. Incorporated: Delaware. Address: 1600 Amphitheatre Parkway, Mountain View, California 94043. Internet: www.google.com.

These shares are a compelling choice for patient accounts. Although ranked to only track the broader market in the year ahead, this issue carries attractive capital appreciation potential over the pull to 2017-2019, based on the earnings growth we envision during that time frame. The search giant is in excellent financial shape, affording it the ability to invest in a number of complementary initiatives.
Kathryn M. Drew November 14, 2014

Long-term prospects remain bright.
Further out, Google ought to glean support from its innovative pipeline, coupled with ongoing ad sales momentum. This should translate into steady top- and bottom-line gains over the 3- to 5-year span. These shares are a compelling.

Sourced from CIBC investor information

Google Inc. (Google) is a global technology company. The Company's business is primarily focused around key areas, such as search, advertising, operating systems and platforms, enterprise and hardware products.

The Company generates revenue primarily by delivering online advertising. The Company provides its products and services in more than 100 languages and in more than 50 countries, regions, and territories. Effective June 25, 2014, Google Inc. acquired Appurify Inc., a San Francisco-based developer of mobile bugging application software. Effective 23, July, 2014, Google Inc. acquired drawElements Oy, a Helsinki-based developer of 3D graphics software. Effective August 6, 2014, Google Inc. acquired Tinker Square Inc. Effective August 22, 2014, Google Inc. acquired Gecko Design Inc. Effective August 26, 2014, Google Inc. acquired Zync Inc. Effective September 10, 2014, Google Inc. acquired Lynx Design Inc. Effective September 11, 2014, and Google Inc. acquired Input Factory Inc.

Appendix B
Twenty-five Factors impacting the management of innovation

Factor	'Ideals' from on-line survey'
1. Management's emphasis is on short-term versus long-term profit.	2.2
2. Management explicitly looks for or has no interest in innovation.	-0.5
3. Management's has tolerance for mavericks or not.	-1.25
4. Planning emphasizes rationing resources or identifying opportunities.	2.9
5. Management's tolerance for failure or not.	-0.51
6. Leaders emphasize management of people and their interactions or not.	3.3
7. Corporation provides career ladders, powers and titles for innovators or not.	2.24
8. Corporation is tolerant towards variances from the corporate norm or not.	-0.74
9. Management's tolerance for uncertainty (as distinct from risk) in the planning process or not.	1.6
10. The style of communication within the organization.	-1.01
11. Management's discourages or encourages use of independent work groups for special purposes.	-1.59
12. Management makes decisions with lots of input from the rest of the corporation or not.	2.47
13. Decision process is elaborate and formal versus short and informal.	0.38
14. The corporation has specific mechanisms available for rewarding innovation or not.	-1.54
15. The organization is planning-oriented versus action-oriented.	-0.24
16. Management has an open and relaxed attitude towards mergers, acquisitions, joint ventures and divestitures or not.	
17. Management expects people to be totally devoted to the corporation or makes room for personal development.	
18. The organization has a decentralized or centralized hierarchy.	-0.86
19. Resources (budget, personnel, time, etc.) are generally available for new ventures or not.	2.61
20. Extent of staff involvement (as opposed to line involvement) in the decision process.	
21. Innovators tend to stay with the organization or leave.	-1.88
22. The organization has or has not an innovative tradition.	2.92
23. The R&D budget is less or more than the competition.	1.89
24. Innovation is perceived as decreasing or increasing.	2.64
25. Employee organizations discourage or encourage innovation.	

Appendix C
Rating Google's management practices with a comparison to our 'Ideal'; 3M

Factor and rating comment re Google's policies and management practices

Factor	3M	Google
F#1; Management's view on profits. Longish term.	3	4
F#2; Management's view on importance of innovation. Absolutely!	-4	-5
F#3; Tolerance of mavericks. No question!	-5	-5
F#4; Planning emphasis. Focus is on finding opportunities.		4
F#5; Tolerance for failure. Very high!	-4	-5
F#6; People and their interactions. Very high!	5	5
F#7; Career for and recognition of innovators. Absolutely!	4	5
F#8; Tolerance to a corporate norm. A 'norm' is discouraged!	-4	-5
F#9; Tolerance for risk (Planning). Very high - almost over the top.		4
F#10; Intra-firm communications formality. Almost none.	-5	-5
F#11; Use of work independent work groups. Many and with…	-5	-5
F#12; Decision making is broadly based. Very much so!	5	5
F#13; Formality of decision process. Relatively short and informal	-1	-3
F#14; Rewards for innovation. Very much so!	-5	-5
F#15; Planning or action orientation. A strong bias towards action.		3
F#16; Attitudes towards mergers etc. Open attitude.	-4	-4
F#17; Company versus personal loyalty. A strong proponent of…	2	4
F#18; Hierarchy; centralized or decentralized. Opposes hierarchy!	-4	-5
F#19; Availability of resources. Seen to be available for good ideas.	4	5
F#20; Staff versus line involvements. Processes encourage broad…		4
F#21; Retention of innovators. Most stay but some key ones have…		-3
F#22; Innovative tradition. In spades!	5	5
F#23; R&D budget levels. Even to embracing Pasteur's quadrant!	5	5
F#24; Perception of innovation trend. Absolytely up!	4	5
F#25; Role of employee groups. May not be relevant.		

■3M ■Google

Appendix D
Checklist for assessing your own organizations' management of innovation

Building a model for the management of innovation – key attributes		Google	3M	Yours
Financial/stock price performance				
Current P/E		27	23	
Return on equity		14.2	28.6	
Return on total assets		8.4	13.3	
Attributes for the management of innovation				
Performance management	Strong financial controls and close monitoring of performance	?	Y	
	A system of managing human resources – alignment and rewards	Y	Y	
	Add your own			
Communication	Regular communication of corporate policies and management practices,	Y	Y	
	Broadly-based input into decision making	Y	Y	
	A commonly-held vision of the future	Y	Y	
	Add your own			
Reliability	Building a sense of trust between company and customer.	Y	Y	
	Delivery of reliable products	Y	Y	
	Add your own			
Technology development	Spending and approach to R&D	Y	Y	
	Maintaining a watch on developments at the customer level and overall end-user	Y	Y	
	Closely monitoring competitor developments	?	Y	
	Investing in new products/services and less so in 'legacy' products	Y	Y	
	Add your own			
Culture	Tight centralized financial management with maximum decentralization and looseness	N	Y	
	Considering the impact of acquisition/divestiture practices on culture	Y	Y	
	Having a healthy respect for traditions	?	Y	
	Add your own			
Strategy and organization	Industry knowledge and its complexity are well understood by a percentage of the Board of directors	Y	Y	
	Suitable succession planning	?	Y	
	Continuity and longevity	N	Y	
	A Board and CEO perspectives on both the short and long-term	Y	Y	
	At ease with adapting ideas from outside the organization	Y	Y	
	Add your own			

Appendix E
3M's Innovation Profile – is the 'Ideal'

White & Partners has constructed a profile of 3M, using the 25 Factors which have been set out in this report. The purpose of so doing is to provide a basis for others to compare themselves, i.e. their own corporation, against this highly-innovative company.

The bar chart sets out, for each Factor, our ranking of 3M. The higher the number, the greater is the emphasis placed on this Factor, at least as seen by W & P. For example; while Factor #2 ranks the importance of innovation very high at 4, the ranking for a tolerance for mavericks, Factor #3, is even higher at 5.

The plus and minus ratings derive from how the question is posed.

Several Factors have no rating, Factors #4, 9, 15, 20, 21, and 25 since no information is available.

3M - the 'Ideal'

#	Factor	Rating
1	Management's view on profits.	3
2	Management's view on importance of...	-4
3	Tolerance of mavericks.	-5
4	Planning emphasis.	0
5	Tolerance for failure.	-4
6	People and their interactions	5
7	Career for and recognition of innovators.	4
8	Tolerance to a corporate norm.	-4
9	Tolerance for risk (Planning)	0
10	Intra-firm communications formality.	-5
11	Use of work independent work groups.	-5
12	Decision making is broadly based.	5
13	Formality of decision process.	5
14	Rewards for innovation.	-5
15	Planning or action orientation.	0
16	Attitudes towards mergers etc.	-4
17	Company versus personal loyalty.	2
18	Hierarchy; centralized or decentralized.	-4
19	Availability of resources.	4
20	Staff versus line involvements.	0
21	Retention of innovators.	0
22	Innovative tradition.	5
23	R&D budget levels.	5
24	Perception of innovation trend.	4
25	Role of employee groups.	0