



REUTERS/Alamy Stock Photo 2D4155P

Microsoft Chairman Bill Gates (L), CEO John Conner, and CEO Steve Ballmer discussing the corporation's future plans for growth and innovation with their employees at their corporate headquarters, Redford, Washington, in July 2004.

Is Your Organization Truly Innovative?

by Gordon Bennett

Lieutenant-Colonel Gordon Bennett is the Commanding Officer of the Canadian Forces Logistic Training Centre. He has served in various positions across the country, including 1 Service Battalion, Technical Services Branch Gagetown, the Canadian Joint Operations Command, and 1st Canadian Division. Lieutenant-Colonel Bennett holds a Doctorate of Business Administration, and is a graduate of the Joint Command and Staff Programme in Toronto. His most recent academic works centre upon innovation and design thinking.

Introduction

The world is full of buzzwords that get used without understanding or meaning. Innovation is often one of these buzzwords. It is frequently used, but must less frequently understood or practiced. The real question is: “How do we know if we are buzzword champions or are truly innovative?” To determine the answer to this question, innovation needs to be defined, and then an assessment made to determine where our organizations stand.

The definitions of innovation are wide and varied. Famed management guru and writer Peter Drucker states: “Innovation can be defined as the task of endowing humans and material resources with new and greater wealth-producing capacity.”¹ Wealth-producing capacity in a military sense can mean improved efficiency in materiel usage, more effective warfighting, improved personnel training and management, and ultimately, the optimization of available resources under given limitations. Bringing a closer definition to how government innovation should work, the Organization for Economic Co-operation and Development (OECD) defines innovation as significant improvements in production, processes, techniques, equipment, design, promotion, or practices.² This definition is broad, fitting most situations.

Innovation is more than simply advancing technology or an arms race. It is far more than attempting to do more with less. Innovation is a mindset and part of an organization’s culture that strives to advance and develop new or improved processes, strategies, practices, and equipment. Above all, it provides flexibility to respond to ever-increasing demands and to optimize the use of resources. Innovation is not the same as change. Change can readily be present and not be innovative. Change can be



US President George W. Bush presents Peter Drucker with the Presidential Medal of Freedom at the White House, 9 July 2002.



The logo of the Organization for Economic Co-operation and Development (OECD).

administrative, change for the sake of change, change for career advancement, or change in response to the environment. It is important to make this distinction from the outset, as innovation is not based upon career desires or personalities, but upon a desired end state.

Summing up these definitions, innovation in DND could be defined as follows: The discovery, implementation, or development of new methods, processes, or tools that maximize the department's societal, economic, and

“The definition of innovation needs to be separated from three concepts, namely: Technology, evolution, and adaptation.”

warfighting contributions. Defining innovation using this definition focuses innovation in a departmental context while encompassing the basic definitions of innovation found in industry. This creates a dynamic combination of innovation attributes that can centre upon how DND should strive to innovate—something that is already inherent to innovative organizations, so not defined by them in these terms.

In a military context, innovative thinking applies from the tactical level through the strategic-political level. At the tactical level, innovative thinking can provide unique solutions across a spectrum from how to effectively and ethically fight insurgents all the way to how a logistic chain is laid out for maximum effectiveness in situations that are not addressed by doctrine. At the operational level, innovative design thinking will help drive plan formation, from orders given from the strategic level while balancing operational assets, such as logistics hubs, to support multiple theatres of operations. At the strategic level, programs such as renewable fuels for training fleets, equipment design for arctic operations, partnerships with industry and academia, licencing R&D discoveries to industry, recruiting, support to industry, and capability specialization are just a few areas for innovation.

Retired US Navy Admiral William McRaven suggests innovation as a contributing element to special forces operations. He states, “Innovation simplifies a plan by helping to avoid or eliminate obstacles...it is also the application of unconventional tactics.”³ Such comments are supported by additional US special operations doctrine that notes that special operations are conducted by “... units who apply special skills with adaptability, improvisation, and innovation.”⁴ Canada's small military requires its members to be adaptable, develop skills to improvise, and be innovative.

The definition of innovation needs to be separated from three concepts, namely: Technology, evolution, and adaptation. Technological development is based in innovation

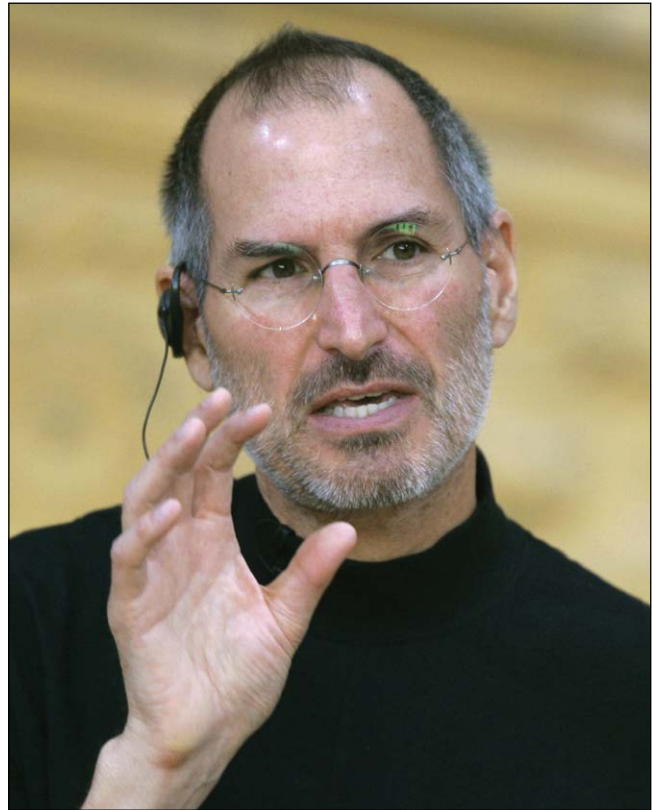


DVIDS photo 517854 by Airman 1st Class Christophe Williams

Admiral William McRaven

and scientific discovery. However, the adoption of technology does not necessarily indicate that an organization is innovative. It may mean that the organization is simply evolving with the use of technology. Evolution is a change within the organization, but also does not signal that an organization is innovative. Most businesses today operate using computers, as opposed to carbon paper. The adoption of computers is an evolutionary change, not an innovation creation for the business that now uses computers even though efficiency and effectiveness are improved.

Adaptation and being adaptable can be seen in two different lights. Adaptation to a new environment, process, technology, or situation does not necessarily mean the organization is innovative. Adaptation may be simply a survival mechanism or common response to a changing situation. A store may change its sales tactics to adapt to a competitor. The change should not be considered innovative unless it is something either unheard of or is at least new for the industry. Dropping prices or changing from commissioned to salaried employees is simply an adaptation, not an innovation. The differentiation between being adaptable and accepting adaptations is that adaptability is predicated upon flexibility and adaptation to the conditions is a forced response.



dpa Picture Alliance archive/Alamy Stock Photo DB0REK

Steve Jobs

Innovation distinguishes between a leader and a follower.

~Steve Jobs

Disinnovation

‘Disinnovation’ is not simply doing the reverse of innovation or failing to innovate; it is fighting against innovation. Contemporary bureaucracies, by their current nature, are disinnovators. Disinnovation is driven by ‘stove-piping,’ myopic viewpoints, a lack of diversity, careerism, an unsuitable definition of risk, apathy, a lack of professional education, poor communication, bureaucracy, inappropriate hiring practices, poor innovation culture, and failure to make timely decisions.

Business writer Patricia Schaeffer suggests five actions that kill innovation.⁵ The first innovation killer is punishment for initiative when problems arise. Punishing initiative and failure is anathema to design and consulting firm IDEO’s practices, both in literature and seen through a site visit. Punishing failure when in experimental stages eliminates initiative, grows distrust, and creates fear. In a military context, punishing failure for initiatives, or when plans do not materialize due to unforeseen events, is far different from punishing a soldier for failure to uphold a legal or lawful command or requirement. Creating a culture of trust and confidence is required to build innovation and to advance the organization. To do so may require reasonable risk, not punishing failure, and using failure as an opportunity to grow. Some may

argue that accepting failure could result in battlefield losses or a failure in acceptance to take responsibly for domestic procurement problems, or could be used as an excuse for underperformance. There is merit to these arguments, but when taken in a leadership context, it is leadership's responsibility to make the correct balance. Furthermore, failure from incompetence, apathy, or neglect are simply not acceptable at any point.

Schaeffer's second killer is 'micromanaging' projects or assignments. Part of the developmental process of leadership permits the assigned person the freedoms they require to do their tasks. Arguably, micromanagement also redirects failure and responsibility towards the supervisor while killing innovation. To kill micromanagement, she recommends leaders not second-guess or overrule staff.⁶ Exceptions to this would be in extreme circumstances, or when the leader's intent is not being met.

Her third innovation killer is a lack of a continuous improvement mentality. She argues that too many people hide behind policies and procedures, using them as a scapegoat for failing to innovate. Encouraging people to regularly assess their practices and seek novel ways to improve should be part of the culture.

Finally, Schaeffer suggests "...the organization [that] favors aggressive internal competition" will undermine the objectives of innovation. Competition must be balanced against a sense of community in the workplace. Opponents would argue that competition in the military is an existing cultural trait that is highly desirable in warfighting. This is true, but is it required for corporate operations? Competition can be used in developing innovation if the competition is centered upon improving the institution, and not for personal gain such as career progression. Career progression can be a benefit, but not the end state, in developing innovation.

Professors Bernd Kriegesmann, Thomas Kley, and Markus Schwering from the FH Munster University of Applied Sciences and the Institute for Innovation Research and Management suggest that a current zero-error culture exists in industry that is adversely affecting how organizations encourage innovation.⁷ They highlight that most businesses do not sanction deviations from established protocols.⁸ They further declare that organizations that are rigid in error prevention too often pay lip service to innovation as the incentive structures create risk aversion. They state:

He who leaves the herd of lemmings and deliberately undertakes an innovation process with a calculated risk, should, in the event of failure, not be mocked and derided, but rather encouraged to undertake further, sensible risks in a spirit of optimism.

Why Public Service Institutions Lack Innovation

Peter Drucker cites three reasons why public service institutions are not innovative.⁹ DND with the CAF can be included in his analysis, even though he does not specifically state 'military' as a public service institution. His declarations are based upon his observations and practice in industry.

First, he suggests that public institutions see themselves as budget driven as opposed to monetary driven. The higher the budget, the more prestige the manager has. The more innovative the organization, the less funding the organization needs and the lower the prestige of the manager. In a monetary organization, profits would drive prestige, as opposed to expending money as is found in government.

His second rationale is that of the veto power of constituents. The concept of the government is to serve everyone. Business serves the most profitable clients. Failing to provide a service to a small minority would be viewed as having an ineffectual government organization—so even the small groups could be seen as having veto-type power. However, this also spells out the

argument as to why governments need to be innovative—to ensure they can cost effectively or efficiently serve these minority markets. He argues that the public services exist to 'do good' and see themselves on a moral absolute mission, rather than an economic mission. In this case, the cost-benefit is discounted in favour of perceived higher morals. He states, "The optimal level for most organizations is 75-80%" in reference to serving profitable clients.¹⁰ In other words, to serve 100% of clients, as the government does, it costs significantly more money with vastly diminishing returns. He continues, "The problem with satisfying the desire to do good to all is that the costs rise

exponentially while the benefits drop exponentially. The harder it works to achieve its objectives by doing what it currently does the more frustrated it becomes while concurrently consuming increasingly higher amounts of resources."¹¹

The moral plane view sees significant effort with diminishing returns. This actually argues the need for innovation in government. If the government seeks to serve all people on a moral plane, then it needs to be innovative in order to reduce the resources needed to serve the most consuming 20% of society.

Fountains of Innovation

The basis of organizational innovation is currently under debate.¹² Andrea Ovans, a senior editor at the *Harvard Business Review*, highlights the debate that rages between three parallel fields of thought: People, Processes, and Culture. She notes that Ed Catmull, former president of Pixar and Walt Disney Animation studios, polled his staff to determine their thoughts regarding the source of Pixar's creativity—hiring great talent or processes to find creative ideas. His polls show a 50/50 split even for this highly-innovative organization. James (Jim) Collins, former Stanford business professor and 2017 Forbes top 100 Greatest Living Business Minds, suggests that the right people with good leadership will produce stellar results, regardless of the path.¹³ Sean Atkins, a USAF officer and innovator, refers to this as leadership with a vision for innovative energy.¹⁴ In his example, he defines the right people, not so much in terms of talent, although that is part of it, but rather, people that are driven to succeed in a team based environment that want the firm and the team to succeed.

"The moral plane view sees significant effort with diminishing returns. This actually argues the need for innovation in government."

The Role of Culture

Australian professor from Charles Sturt University, Ramudu Bhanugopan, and industry practitioner Roy Shanker, state "...employee's perception of climate affects the extent to which creative solutions are encouraged, supported and implemented."¹⁵ Their work suggests that creating a climate for innovation is closely tied to employees being innovative. Research from industry practices and first-hand observation when visiting innovative firms confirmed these findings, in that culture is the preeminent success factor in developing an innovative organization. Looking at DND, military/government culture and innovative culture are not mutually exclusive.

In conversations with IDEO staff, the number one reason it is so innovative is due to a constant redeeming culture of innovation. Its employees are driven to design better products, better services, and improved processes. The books written by IDEO staffers and the IDEO principles (the Kelley brothers) support what the employees stated during a site visit. Management consultants with Booz & Company (now a subsidiary of PricewaterhouseCoopers) Barry Jaruzelski, John Loehr, and Richard Holman state, "More important than any of the individual elements, however, is the role played by corporate culture."¹⁶ Hiring at IDEO plays a major role in forming culture. Culture is then created by the passion of the hires within the framework of mission accomplishment, processes developed by the founders, and an attitude of exploration and experimentation. Motivation comes from within the individual in their drive to create.

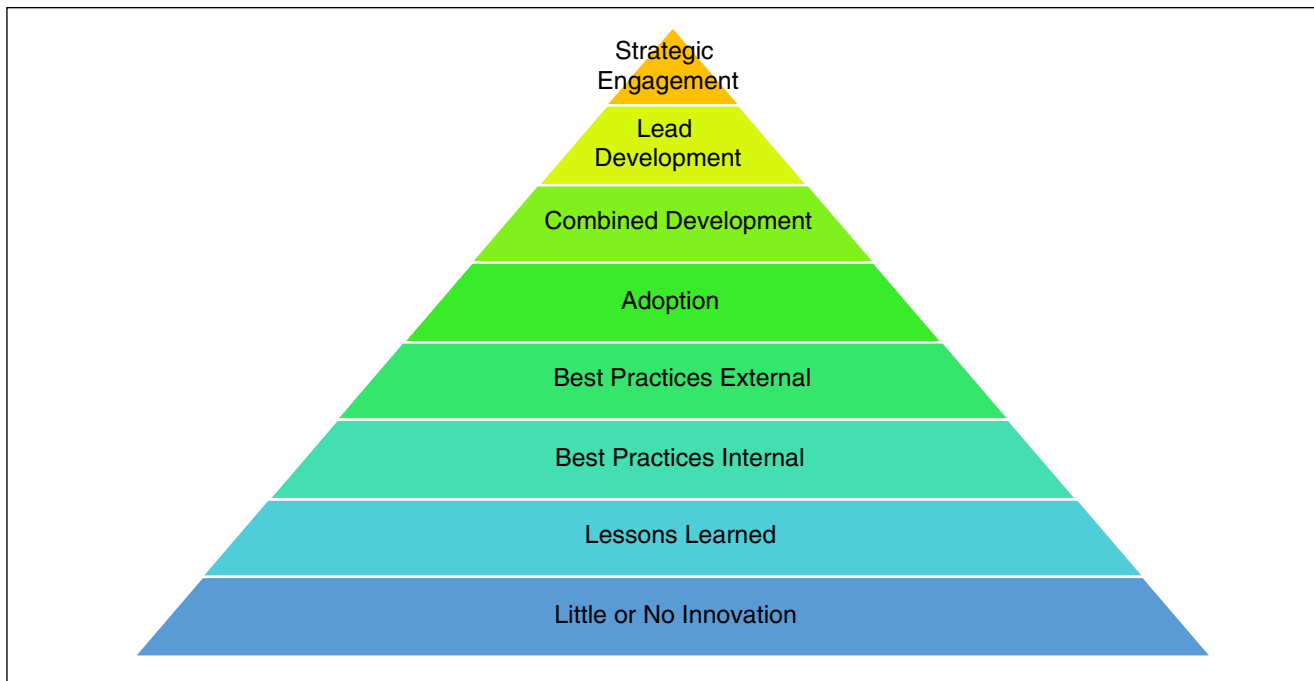
The Innovation Pyramid Model

We can determine the level of innovation in an organization using the innovation pyramid. This model is based upon the research for this project, and includes first-hand experience, observation of current practices in DND, and comparisons with observations made first-hand at IDEO and other organizations

with innovative industry practices. The model will show managers where they need to go, and what signs they should expect to see as they develop innovation within their organizations. The model can be used for small organizations, such as platoons or it can be applied to larger organizations, such as an Assistant Deputy Minister's office or the entire department. It is highly feasible that smaller organizations could be innovators while larger ones within DND may not be innovative at all. It is also feasible to have a low-level unit, such as a subunit, be innovative within its realm, but its higher headquarters may be far from innovative.

The heart of the pyramid is culture. A culture of innovation will drive innovation upwards, while a culture of disinnovation and 'same as last year,' 'not invented here,' 'I can't,' or 'it's not my job' attitudes will prevent upward progression. It is important to recognize that culture is a driver towards Strategic Engagement. The model starts with the lowest level of innovation—essentially none or at the very most limited innovation on a small scale by some individuals, but not as an organization. *Innovation* starts when individuals start looking to use innovation as a tool. *Learning* begins by researching what lessons others have learned in a particular domain. Using the example of alternative fuels for commercial military fleets, inquisitive innovators start by searching out what other organizations have developed or used. At this stage, there is simply an interest in researching basic information regarding a specific topic. There is likely no research question to answer and significant resistance to innovation in the culture.

Finding lessons learned is important, but there needs to come with it a three-part acceptance solution. The first is to have a system to capture corporate innovation practices and lessons learned. This could be a DND innovation library, bulletin, or other method to capture, disseminate, and champion internal and external learning. How often have staff had to create briefing notes on subjects that were previously briefed a year or two prior or corporate knowledge lost due to postings or retirements? An innovation information



Author

Figure 1 – Innovation Levels



repository that is regularly reviewed as part of education and training, and championed through the DND media (i.e., the *Maple Leaf*, regional papers, technical bulletins, DND-wide emails, a portal site with alerts to a subscriber list, and so on.) is required to facilitate best practices and then adoption.

At the ‘best practices’ stage, the innovator—that may or may not be a formal leader within his or her organization—branches out to find out what best practices are available internally to the organization. These practices at their base level may be practices that should have been accepted, but *are not* or *are* practices that are being used without significant fanfare. Best practices should consider both short-term and long-term elements concurrently, as confirmed by consulting firm Deloitte.¹⁷ Best practices can be developed through two means. The first is exposure to innovation training. The second is sharing innovation successes within DND.

Adoption includes the implementation of best practices including lessons learned across DND. Adoption is accompanied by changing cultural attitudes towards innovation, and by advancing the level of innovation in the organization. Adopting innovation means accepting and applying principles and practices from other sectors, including from outside the department. Adoption sees concepts taken from others and modified to suit the organization’s needs. An excellent example of the adoption stage from industry is Jack Ma of Alibaba. He followed the same innovative principles as eBay, only he used it for business-to-business sales, rather than between consumers or businesses. Ma’s adoption of essentially an eBay for business occurred four years after the start of eBay and two years after eBay officially become ‘eBay.’ By the time



Alibaba was founded, eBay had already sold over one million items and had gone public.¹⁸

Combined Development starts when the organization is beginning to adopt a regular practice of innovation culture well into product or service development. Combined development is well-manifested in the medical community, with the US military in joint ventures with medical collaborators. Collaborations with industry and the US Defense Advanced Research Projects Agency develops technologies with outside partners—many of these partnerships have improved medical advancements for both the military and the private sector.

“Adoption is accompanied by changing cultural attitudes towards innovation, and by advancing the level of innovation in the organization.”

Lead development in the model is the sub-pinnacle of innovation. Leading innovation means that the culture has been transformed from one of little-or-no innovation, to an organization that leads in a particular sector. Just a few examples of what DND could lead in, based upon current successes or present areas of development, could include: Arctic sustainment, biofuels, human centric combat

clothing, combat feeding, and humanitarian support, to name but a few. Lead development means the organization is recognized as an innovation leader at a minimum within the same industry or sector. It is not necessary for lead development to be only strategic. Identifying opportunities at the unit or formation level can also initiate a lead development project. Lead development on a consistent basis, however, requires a culture change. When consistent projects are sustained and results garnered, or innovative lessons learned and applied from failures, development flows with multiple organizations, and new development happens—only then can the organization be considered to have achieved a lead development status.

Finally, the pinnacle of innovation is the Strategic Engagement Level. At this level, the organization has embraced an innovation culture even if the projects and solutions are low cost, low key, and are not centred upon technology. The vast majority of members within the organization are in an innovative mindset, and are thinking about how to improve their individual and collective realms of responsibility. The strategic engagement level then takes these collective thoughts and practices, engages and leads other entities outside the normal partnerships. Strategic engagement may result

in high-level innovations, including: Patent filings; revamping of policies and procedures for the department, nation, and allies; mentoring other organizations on how to become innovative; and demonstrating high levels of efficiency and effectiveness. At this level, failures are accepted and overcome in training and development. Examples of firms in this category include 3M, IDEO, Apple, Salesforce.com, and Pixar. At this level, innovative leaders connect with others outside their organizations and develop innovative leadership internally.

Conclusion

Understanding innovation comes from having a clear definition of what is innovation. True innovation is tied to culture, and as culture improves, so does innovation. The Innovation Pyramid can be used to determine from where we have come and where we need to go to be truly innovative. By following the innovation pyramid, organizations can formulate a roadmap for true innovation.



NOTES

- 1 Peter Drucker, *The Essential Drucker*, (New York: Harper, 2001), pp. 22-23.
- 2 Organization for Economic Co-operation and Development, 2016, at: <https://www.oecd.org/site/innovationstrategy/defininginnovation.htm>.
- 3 William H. McRaven, *The Theory of Special Operations*, (Monterey, CA: Post Naval School, 1993), pp. 17-20.
- 4 *Ibid.*, p. 20.
- 5 Patricia Schaeffer, "Five Cultures That Kill Innovation," in *IEEE Engineering Management Review* 44(3), (Third Quarter, September 2016).
- 6 This would be the case barring safety or significant risk to which the employee is not well versed. However, if an employee needed to be overruled, they should be provided with the reasons why and encouraged to continue to carry out innovative activities. Repeat overruling suggests a cultural, experiential, training, or leadership problem.
- 7 Bernd Kriegesmann, Thomas Kley, and Markus G Schwering, Making Organizational Learning Happen: The Value of "Creative Failures," in *Business Strategy Series*, 8(4), pp. 270-276.
- 8 Bernd Kriegesmann, Thomas Kley, and Markus G Schwering, Making Organizational Learning Happen: The Value of "Creative Failures," *Business Strategy Series*, 8(4), 270-276.
- 9 Peter F. Drucker, *Innovation and Entrepreneurship: Practice and Principles*, (New York: Harper & Row, 1985), pp. 179-180.
- 10 *Ibid.*
- 11 *Ibid.* p. 179.
- 12 Andrea Ovans. "Is Innovation More About People or Process?" in *Harvard Business Review*: (27 February 2015), at: <https://hbr.org/2015/02/is-innovation-more-about-people-or-process>.
- 13 James C. Collins, *Good to Great: Why Some Companies Make the Leap ... and Others Don't*. (New York, NY: HarperBusiness, 2001).
- 14 Sean Atkins, "Staff Sergeant Disruptor: Observations on Leading Innovation," in *War on The Rocks*, (2 November 2016), at: <https://warontherocks.com/2016/11/staff-sergeant-disruptor-observations-on-leading-innovation/>
- 15 Roy Shanker and Ramudu Bhanugopan, "Relationship between Organizational Climate for Innovation and Innovative Work Behavior in Government-linked Companies." International Conference on Human Resource Management and Professional Development for the Digital Age (HRM & PD). Proceedings, (2014), p. 21.
- 16 Barry Jaruzelski, John Loehr, and Richard Homan. *Strategy+Business Magazine*, Booz & Company, Preprint 11404, at: <http://www.strategyand.pwc.com/media/file/Strategyand-Global-Innovation-1000-2011-Culture-Key.pdf>.
- 17 Deloitte, Public Sector Disrupted: How disruptive innovation can help government achieve more for less, at: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Public-Sector/dtl-pps-publicsectordisrupted-08082013.pdf>.
- 18 Timelines were compared between Alibaba and eBay's history, at: <https://www.ebayinc.com/our-company/our-history/> and <http://www.alibabagroup.com/en/about/history>.