

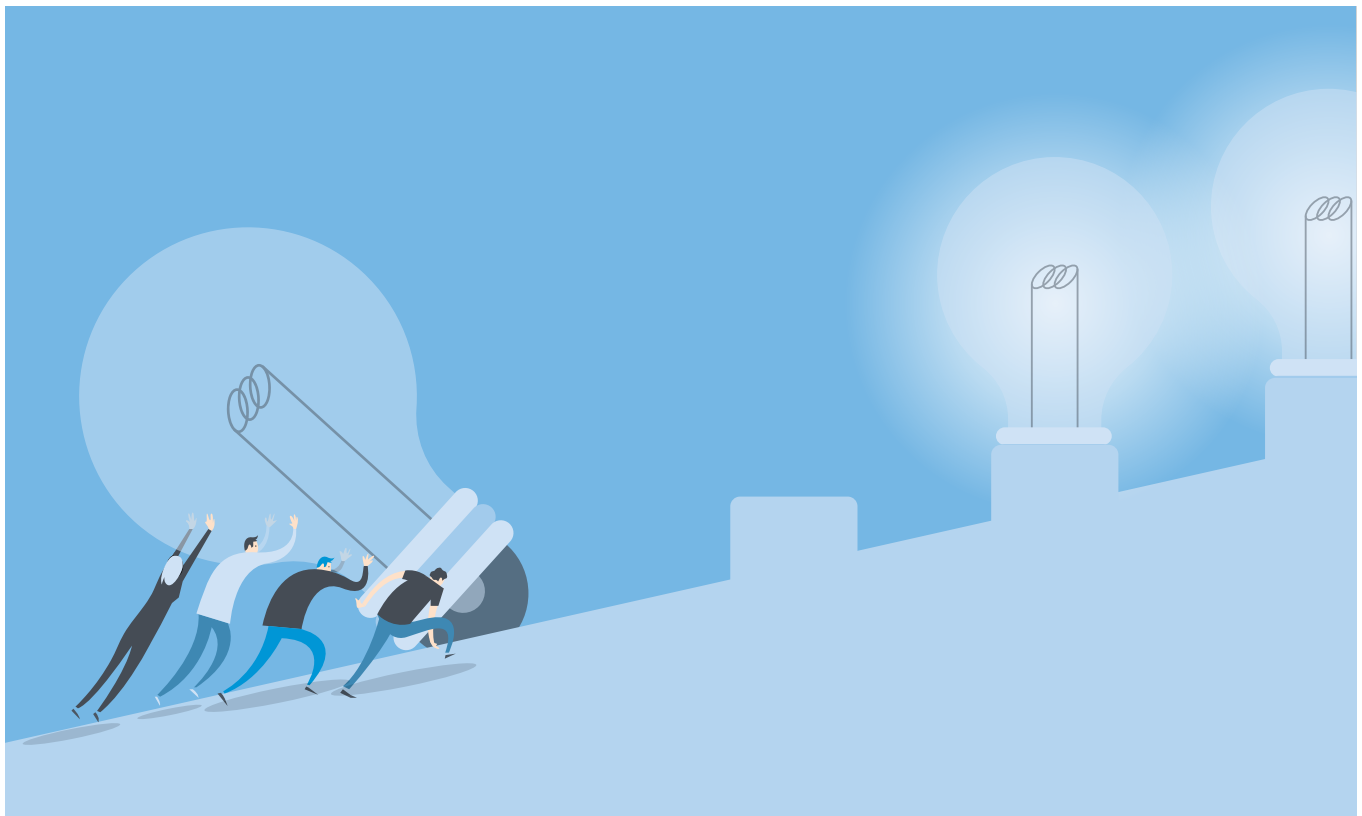
The age of innovation enlightenment



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How large corporations are ushering in a new era of ingenuity and inventiveness

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Innovation is the lifeblood of modern business. Corporations depend upon a steady infusion of fresh ideas and creativity, contributing to a constant flow of new products, services, business processes and monetisation models. Perpetual reinvention of existing business practices – tapping into new markets, discovering unique sales techniques, rethinking supply chains – is not only a business norm, it's become a competitive differentiator. In an era dominated by the digitisation of nearly every artifact of human existence, where decades-old industries can become obsolete overnight, it's no longer good enough to be merely innovative. To prosper, or even just survive, you now must out-innovate your competitors.

But where does innovation come from? Can it be manufactured or repeated in a sustainable fashion? Why does there often seem to be an inverse relationship between commercial success and the ability to sustain fresh innovation? What if it were possible to construct the perfect breeding ground for inspiration, to recreate an atmosphere in which creativity flourished through constant confrontation with conventional thinking?

This white paper attempts to answer these questions, as well as explore how Cisco is overcoming obstacles to ingenuity and inventiveness believed to be inherent in most modern corporations. By cultivating a new and multifaceted approach to innovation that encompasses people, processes, partners and culture, Cisco is challenging the widely held perception that big business is incapable of sustained innovation.

Introduction

Most business leaders understand the competitive and strategic importance of innovation. A recent survey by Allianz Insurance found that 83 percent of executives from UK businesses believe innovation is a key driver of future success. It's also no surprise that the Boston Consulting Group's popular annual ranking of the most innovative companies in the world includes some of the most profitable corporations on the planet.

While the correlation between meaningful innovation and subsequent success is easy to identify, a more elusive task is tracking innovation to its source. Where does innovation come from? More importantly, can innovation, or the inspiration or creativity it springs from, be manufactured? Is it possible for today's corporations to industrialise innovation, rendering it a repeatable process that delivers measurable business value?

The answer to these questions is vitally important to today's leading businesses, as well as their customers. The long-term success of businesses across all industries – automotive, manufacturing, telecommunications, media and entertainment, education, aviation and so on – is sustained innovation, achieved by tapping into a seemingly bottomless reservoir of innovation. Without sustained innovation, businesses quickly lose their competitive edge and the loyalty of their customers.

But tapping into a wellspring of innovation capable of supplying a steady flow of ingenuity and inventiveness is a monumental achievement for any business – let alone a large and established commercial entity. Pursuit of a steady infusion of innovation is forcing many highly successful businesses to reconsider long-standing practices and dismantle corporate structures that have historically prevented innovative thinking from seeping into the upper layers of management. It is prompting some of the largest companies in the world to deconstruct the innovation process, starting with the exploration of a few fundamental questions:

- Is innovation art or science? Is it a random act of inspiration or can it be expressed in a formula or validated through systematic observation, measurement and testing?
- What's the relationship between innovation and inspiration – or creativity? If innovation is the end product of creativity, is there an opportunity to streamline or accelerate the process that transforms an idea into an action?
- Can it be manufactured and nurtured on any sort of predictable timescale or is the harnessing of innovation largely accidental and opportunistic, like catching lightning in a bottle?

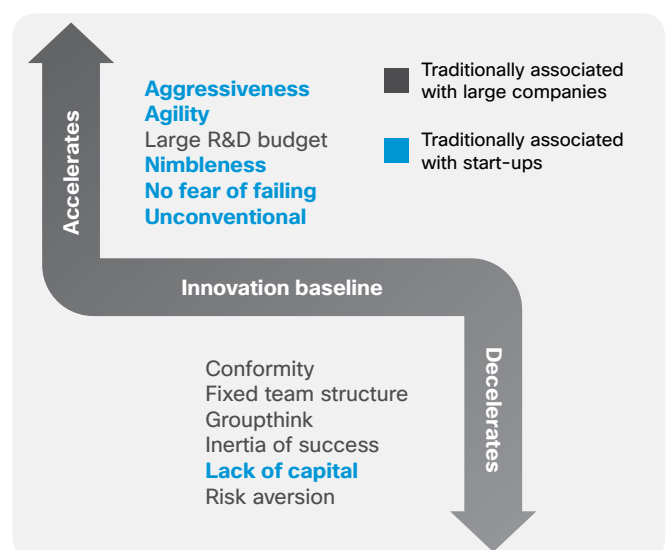
What most businesses now know with certainty is that to not innovate is to not compete. Now, more than ever, clinging to the status quo, allowing value propositions to grow stale and inflexible, is a recipe for eventual oblivion. The commercialisation of the Internet and the widespread availability of broadband connectivity have reordered the competitive landscape and shifted it to a digital plain. Recent artifacts of this digital era, including WiFi connectivity, the Internet of Things (IoT) and Big Data, are empowering innovative companies of all sizes with the ability to disrupt long-standing business models in a blink of an eye. Billion-

pound businesses that have maintained dominant market share for decades are now just a good idea away from obsolescence.

In the past few years alone, the publishing, music and film industries have been upended by innovative entrants like BuzzFeed, Spotify and Netflix, which have claimed positions of dominance by demonstrating superior agility and greater mastery of the digital domain than much larger and more established rivals. Now, a second-way of digital disruption is reverberating through the business world. Industries dependent on physical properties that cannot be virtualised, including transportation and hospitality, are also being challenged by innovators, like Uber and Airbnb, that have learned to leverage the digital realm to topple longstanding business models.

These newcomers have risen rapidly mainly by challenging deeply entrenched business models and value propositions, an exercise that many believe to be the catalyst for kick starting innovation. The process of reinventing a business often begins with a simple question: "What if hailing a cab on a street corner isn't the fastest, most convenient or least expensive way to reach your destination?" Or, "What if it were possible to provide business or pleasure travellers with a more genuine, immersive lodging experience?"

The Innovation Index



The popular association of characteristics that encourage innovation with start-ups has created the perception that large companies are incapable of being creative or inventive.

The previous examples might suggest that start-ups hold the inside track on innovation. Young businesses and established corporations are widely perceived to be on opposite ends of the innovation spectrum. A 2015 survey conducted by the Global Center for Digital Business Transformation revealed that executives from 12 business sectors perceive that large businesses lag significantly behind start-ups in agility, experimentation and risk taking. The same study suggests that digitisation has evened the competitive playing field, making it more difficult for established companies to fend off challenges from smaller competitors.

While exceptions exist, maturing and expanding businesses tend to acquire practices and organisational structures that naturally impede creativity and inventiveness. Innovation often requires an organisation to challenge the very ideas, practices

and processes that were chiefly responsible for its success. Being innovative in a large corporation often means working to intentionally displace existing services or products, which may be among the most popular in the world. This type of behaviour is considered counter-intuitive by many workers, especially those who have long-term career ambitions.

But what if that wasn't the case? What if it were possible for a large corporation to create conditions that were favourable for the flowering of inspiration and creativity, which would breed innovation? The remainder of this document looks at the history of innovation, the conditions in which it has flourished and how, here at Cisco, we are overcoming traditional corporate roadblocks to spearhead a renaissance of innovation and potentially set the stage for a new era of sustained inventiveness and creativity.

Four unconventional paths to innovation... and how to chart them

Perhaps the most confounding part of the search for a systematic approach to innovation is that just when you think you figured out a repeatable formula for pumping out marketable ideas on a regular basis, the next big thing in business materialises out of what seems like thin air.

It turns out that happenstance, unintended consequences and plain old dumb luck figure as prominently in the generation of innovative ideas as dedicated think tanks, bloated R&D budgets and carefully structured corporate initiatives. But just because you can't always control the forces of creativity and ingenuity, doesn't mean that you can't increase your chances of benefiting from the occasional accident.

What follows are descriptions of four unconventional routes to innovation and the lessons they can teach you about creating the right conditions for generating your own serendipity.

1. Byproduct

Some of the most popular inventions of all time were produced in the pursuit of something entirely different. The Slinky was a botched attempt at creating a device to stabilise instruments on ships. The man credited with inventing Teflon, the non-stick coating found on cookware, was experimenting with chlorofluorocarbons. And Coke, the most popular soft drink in the world, was created for medicinal purposes and was intended to be dispensed by doctors, rather than vending machines.

No, you can't count on every new product, service or business model initiative to leave a trail of prototypes or near misses that end up being unintended

commercial successes. What you can do, though, is avoid being so focused on the target of your innovation that you fail to recognise new or adjacent opportunities to build customer value. Never dismiss the outcome of a good idea until you've considered its potential value in another setting, such as a different market or application. And don't forget about timing. Few products or services reach commercial viability in lockstep with customer demand. Today's bust may be tomorrow's next big thing.

2. Peripheral knowledge

A popular example of innovation resulting from the sharing of peripheral knowledge is Reebok reportedly finding inspiration for cushioning its basketball shoes from intravenous fluid bags. At its most basic, innovation through peripheral knowledge means the cross pollination of ideas from multiple knowledge domains.

While professors from the Wharton School of Business in the United States have penned scholarly reports on how businesses can harness the power of peripheral knowledge, a simple way to mash up ideas from different disciplines is for businesses to bring together workers and researchers with diverse backgrounds. Recruiting researchers with liberal arts backgrounds or professional experience in unrelated industries is another way of tapping into the potential power of peripheral knowledge, as well as large corporations working closely with start-ups.

3. Inter-disciplinary

Similar to innovation through peripheral knowledge, an inter-disciplinary route to new business models or discoveries

comes from applying the capabilities of one knowledge domain to a completely unrelated one. What do literature and data analytics have in common? Most would say, "Nothing." But that didn't stop a few Big Data experts from the University of Texas in the United States from recently identifying an Elizabethan-era play as belonging to Shakespeare. Armed with pattern detection software, the academics conclusively determined that the Bard had penned a play that had been credited to another for the past 400 years.

The innovative company will constantly seek to apply the power of new technologies, like Big Data and the Internet of Things (IoT), to unrelated disciplines. The intersection can often uncover fresh sources of products or capabilities that have great business value. Differing market sectors, such as education, transportation, energy management and so on, are routinely unlocking new business value through integration with IoT-savvy technology firms.

4. Inter-cultural

Continuing on the diversity theme, innovation is sometimes the result of simply putting people together from different backgrounds. Some of the most audacious scientific discoveries, including the harnessing of atomic energy, emerged from a melting pot of intellectual diversity.

Creating innovation teams of individuals with unique perspectives can sometimes create the perfect conditions for meaningful creativity to take root. Today's immersive, high-speed collaboration technology can be very effective in bringing together virtual and diverse teams from within a multinational organisation.

Anatomy of innovation

From a business perspective, innovation is easily recognised. New products, new services and other new paths to monetisation are the byproduct of innovation. Innovation is also the engine that drives new approaches to existing business models and value propositions by leveraging the latest technologies and shifts in cultural or societal ethos. Innovation has no boundaries. A good idea can flower anywhere: research and development, marketing, the supply chain or in a go-to-market strategy.

The past 50 years or so have been witness to a number of market disruptions instigated by innovative companies that have challenged or even displaced incumbent market leaders. By introducing a manufacturing system based on the elimination of unnecessary or uneven processes, Japanese car manufacturers were able to take over leadership of the global automotive industry in the decades following WWII. This so-called lean approach to manufacturing has been imitated widely and is still considered a viable model for an efficiently run business. The 2013 bestseller, *The Lean Startup*, pays homage to what many consider the most influential manufacturing methodology to be introduced since the assembly line.

Technology advances are often a catalyst for business innovation. The invention of steam-powered machinery literally fueled a revolution in transportation and manufacturing in the 18th and 19th centuries. Similarly, the recent commercialisation of the Internet and the proliferation of broadband connectivity have contributed to a wave of disruption that has yet to fully crest. Apple, which cultivated a reputation for contrarian thinking in the personal computer space in the early 2000s, seized on the opportunities created by the digital era to essentially reinvent the way consumers purchase, store and listen to music. A few years later, the company was at it again, wresting control of the multi-billion-pound mobile phone market from entrenched competitors who lacked Apple's vision and agility and whose appetites for risk taking were dulled by their own successes.

Cultural, social and political shifts can also be breeding grounds for innovative thinking. Sustainability is now big business. Expanding awareness of the environmental dangers of non-renewable energy sources has prompted multiple companies to introduce so-called green products or practises, often as replacements for existing products. Recognising that socially conscious consumers are willing to pay more, in some cases, for sustainable products, companies are investing billions to develop products that are environmentally friendly. Driven by the increasingly green sensibilities of consumers, multiple detergent companies, for example, have successfully launched products that are as effective in cold water as in hot.

Airbnb's principal mode of innovation was tapping into a social shift that few saw coming. Almost no one outside of Airbnb envisioned that lodging with strangers or in a stranger's residence would appeal to a demographic outside of money-strapped students or New Age Bohemians. As evidenced by the company's most recent evaluations, Airbnb is now reaping the rewards of being at the forefront of a cultural phenomenon. Using the company's services is now considered by many as a sign of open-mindedness, as well as an opportunity for business and pleasure travellers to fully immerse themselves in local culture.

But to better understand the essence of innovation – to break it down to its essential components – requires exploration of innovation outside of its business or economic context. Where does innovation come from? How has it evolved over the course of human history? What were the greatest ages of innovation and did they have anything in common, that companies can learn from?

The linkage between creativity and innovation is undeniable. Not coincidentally, the most prolific periods of artistic and scientific expansion and creativity in European history – the Renaissance and the Enlightenment – were fueled by a radical reordering of the relationship between humans and societal institutions. Belief in the infallibility of religious dogma and the pre-ordained authority of the government began to give way to critical enquiry about natural phenomena. The birth of so-called humanism unleashed a tidal wave of curiosity about the way the world works and its origins, which had been discouraged or even forbidden for centuries.

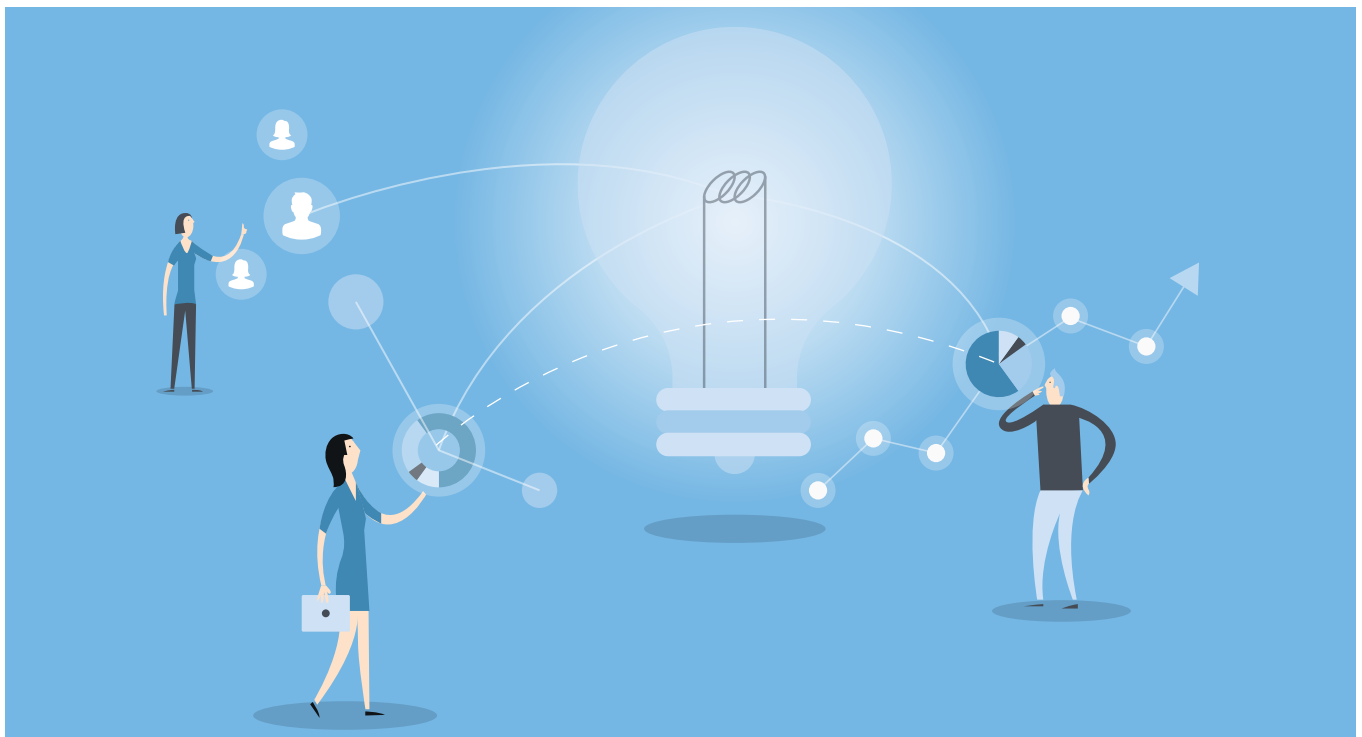
"If you would be a real seeker after truth, it is necessary that at least once in your life you doubt, as far as possible, all things." This phrase, uttered by French philosopher and mathematician René Descartes, captures the prevailing sentiment of European intellectuals in the first half of the 17th century. Individualism and unbounded curiosity were the driving forces behind both the Renaissance and the Enlightenment. The groupthink and subservience to authority of the Middle Ages mentality were replaced by individual inquiry and intellectual curiosity. Breakthroughs in the arts, sciences, philosophy and politics sprung from a deeply ingrained scepticism of the status quo. The leading minds of the Renaissance and the Enlightenment were driven by the belief that the human spirit, a unique and powerful force in the universe, was capable of continuous renewal and advancement.

Individualism as a prerequisite of innovation adds further support to the perception that start-up businesses might be a more fruitful source of inventiveness than large corporations might be. Novice businesses are not only often a reflection of a single person or a small group of individuals, the natural concentration of decision-making authority allows start-ups to be especially agile and deliberate. Large, established businesses are often encumbered by multiple layers of management, as well as investors or shareholders that discourage risk taking, especially when a business is successful.

The next section of this document takes a closer look at the difficulties faced by most modern corporations to duplicate the conditions that have historically been conducive to the flowering of innovation.

Innovation and corporations

Nearly every successful business leader will cite the ability to stay nimble and constantly reinvent existing practices, procedures and value propositions as keys to long-term commercial sustainability. Former Apple CEO Steve Jobs is famous for identifying innovation as the distinguishing feature between leaders and followers. Conversely, the inability to sustain innovation is not surprisingly one of the major reasons that sometimes spectacularly successful businesses surrender market dominance seemingly overnight. The rapid descent of BlackBerry from the top spot of the mobile phone market to single-digit market share and competitive afterthought is a recent example of the disastrous consequences of being out-innovated.



Not every large and successful business is destined to eventually fail. Many market leaders, even in an era where digitisation has made it increasingly difficult to fend off competitive challenges, manage to stay on top, often by exploiting the major advantage they hold over smaller competitors: access to large sums of capital. Merger and acquisition, when done properly, is an effective way of renewing a company's wellspring of innovation, enabling even a set-in-its-ways corporation to regularly assimilate innovative business models and creative professionals into its corporate ranks. Large research and development budgets are additional financial advantages enjoyed by many established companies. Even a small percentage of revenue dedicated to R&D can provide a mid-size corporation with the ability to put millions toward innovation.

But that doesn't mean that large amounts of capital guarantee innovation. A now famous study from Booz Allen Hamilton found "no significant statistical relationship between R&D spending and the primary measures of financial and corporate success." The report tersely concluded: "Money simply cannot buy effective innovation."

These findings, as well as similar studies, contribute to the perception that the bigger a business becomes, the more difficult the struggle to sustain the creative and inventive forces that were responsible for its initial success. Multiple characteristics of the modern business pose potential obstacles to innovation:

- Averseness to risk taking and potentially cannibalising profitable products or services. On one level, a large and successful business is heavily reliant on a focused workforce, performing in unison to propel the enterprise forward. Championing alternatives to existing business practices or putting resources behind an idea with a high potential but a low probability of success can be a risky career move. Few organisations grant executives, or even their general workforce, the freedom to fail.
- A hierarchical structure that blocks innovation from reaching the top levels of management. The perceived deficiency of innovation at large businesses may not be due to a lack of ideas, but the inability of those ideas to make their way through the many layers of a modern corporation's

organisation structure. As innovative thinking percolates up the corporate hierarchy it is subject to dilution or simply being ignored.

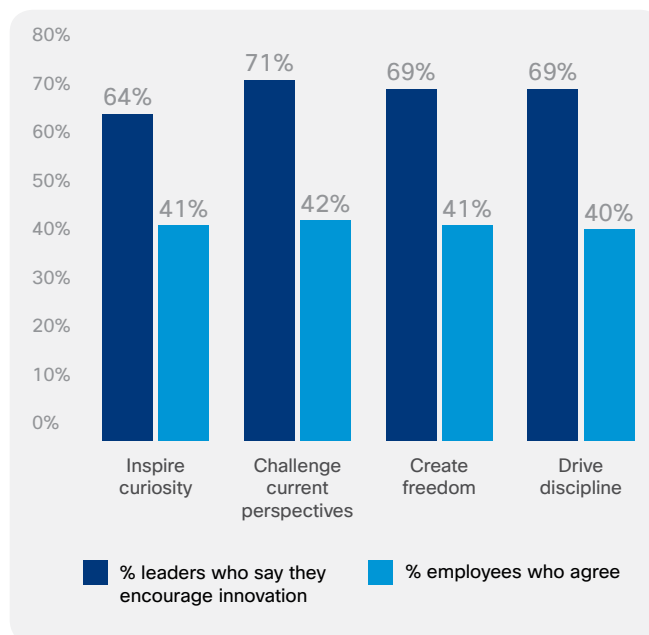
- A fixed team structure in which each employee is assigned a precise job responsibility. This type of rigid delineation of job tasks challenges corporate agility by discouraging professionals from addressing challenges or opportunities perceived to be outside of their job descriptions. Fixed team structures often contribute to a “that’s not my job” work ethic.
- Groupthink or the squelching of individual thinking. As mentioned earlier, an emphasis on individualism and challenging the status quo was a hallmark of the most prolific eras of artistic expression and scientific exploration in history. Most modern organisations develop new products and services through committee and rigid procedure, encouraging conformity rather than individualism.
- The inertia of massive and well-entrenched operations and procedures. The oft-used simile of a large organisation as an ocean liner that is incapable of quickly altering its course has some basis in reality. Operational aspects of a business, such as supply chains, are sometimes driven by their own inertia. Corporations are often unwilling or incapable of reversing the momentum of existing operations and practices.
- Reluctance to reinvent a successful product or service. Quarter after quarter of market share leadership and rising revenue can be powerful paralysing agents. Fearful of disrupting their own success, business leaders often overlook looming competitive threats or fail to react quickly to technological disruptions or societal shifts.

Reluctance to cannibalise its own products was the undoing of US-based Kodak, one of the most successful photography companies in the world, according to a Mashable column from a few years ago. Despite inventing the digital camera in 1975, the company only half-heartedly embraced the new technology, literally putting its invention on a shelf for roughly 20 years to focus its efforts on protecting its market-leading analogue cameras and film products. The iconic company eventually entered the digital arena but only after competitors had introduced superior products. In 2012, Kodak filed for bankruptcy and announced it was abandoning the digital camera market.

Many businesses suffer from a perception gap that exists between management and employees. Managers at established corporations, according to a study conducted by Development Dimensions International (DDI) and published in the report *Creating Conditions for Sustainable Innovation*, often believe they possess characteristics that encourage innovation that employees do not recognise.

But change is in the air. Corporations are beginning to search for remedies that provide detours around these roadblocks. Hackathons and corporate-sponsored boot camps, as well as the funding of corporate entities that resemble venture capital firms and other internally focused initiatives are among the many vehicles large corporations are employing to inject innovation back into their businesses.

The Innovation Gap



Source: Development Dimensions International, Inc.

One of the more innovative and recent attempts to foster individualism within a large company was made by Adobe Systems, maker of nearly ubiquitous digital editing and publishing tools and products. As a 2015 article from *Forbes* recounts, the company is literally attempting to capture innovation in a box. Adobe’s Kickbox programme provides would-be entrepreneurs inside the company with a bright red box that contain the essentials of any promising start-up: coffee, junk food and a small dollop of seed money to spend as they see fit and without fear of recrimination in the face of failure. The motivation behind Kickbox is to provide enterprising employees with the means to bypass the corporate overhead that often blocks good ideas from getting off the ground and to create a culture in which innovation can thrive.

Large businesses are also making concerted efforts to change corporate culture and cultivate innovation by making adjustments to traditional work practices, providing workers with the freedom to sometimes follow unconventional paths and tackle tasks from unique angles. Recognising that innovation is the key to success and the individual’s drive to challenge the status quo is the fuel powering innovation, forward-looking organisations are making significant headway toward overcoming institutional obstructions to innovation by empowering workers – at all levels of the organisation – to think differently.

But they are also learning that overcoming institutional inertia doesn’t happen overnight and obtaining innovation Nirvana requires much more than merely reciting a mantra. The next section of this document looks at how one of the largest and most successful technology companies in the world is pursuing a multifaceted program aimed at not only infusing its own organisation with an influx of innovation but also fueling a sort of innovation zeitgeist that will envelop the larger ecosystem, including partners, suppliers and the company’s customers.

The imperative of ‘what’s next’

They just don’t make business models and value propositions like they used to. It wasn’t that long ago that a solid business model would last a generation – or even longer. In today’s dynamic market place, though, you’re lucky to find a value proposition with a shelf life of a year or two.

It’s not that there’s a scarcity of good ideas. In fact, just the opposite is true. The digital era in which we now live is a breeding ground for new and improved ways of doing business. But nearly as fast as a new business model can be put into play, a newer, better one comes along to replace it. It’s no mystery, then, that modern businesses require a steady stream of innovation to remain relevant. To thrive, or just survive, established corporations need to turn a sceptical eye toward traditional business practices. They need to begin to reexamine and deconstruct current business models and value propositions, even those that are currently market leading. They need to challenge pre-conceived ideas and assumptions underlying existing notions of what creates value in today’s market.

In short, they need to adopt what are now commonly known as **next practices**. This new approach to business development is a direct challenge to the age-old business convention of implementing tried and tested procedures, commonly referred to as best practices. Best practices, proponents of next practices principles say, are retrograde in nature, requiring corporations to look to the past to deal with today’s and, eventually, tomorrow’s challenges.

What businesses should be doing, advocates argue, is turning those tried and tested procedures on their head. Next practices call for a continual confrontation with the conventional. When properly applied, next practices wage a perpetual war upon the status quo. In many ways, this new way of approaching the creation of modern business models is a remedy for the innovation-blocking structures and practices that ail many of today’s large corporations.

Next practices are workarounds to corporate groupthink, aversion to risk taking and the reluctance to rethinking existing business models. A next practices approach is designed to shield individuals and designated teams from being constrained by existing corporate practices. It provides a sort of vacuum in which innovators can develop and test new models, free from the sometimes autocratic procedures and protocols of the larger organisation.

A prominent precept of next practices is that businesses must become vigilant watchdogs for the emergence of new technologies or societal shifts that can trigger changes in the way consumers value existing products and services. As recently as a few years ago, who would have guessed that an increasing number of television viewers would prefer to binge watch seasons of their favourite shows, as well as view them on portable devices connected to the Internet? Similarly, it required the complete abandonment of every known assumption about what business or pleasure travellers value from the hospitality industry for the founders of Airbnb to hit on the value proposition that now anchors their unique business model.

Next practices are most effective when they are embraced by top management. In September of 2015, several of the largest companies in the world, including Procter & Gamble, Starbucks and Goldman Sachs, joined a coalition of companies that have committed to powering their operations entirely with renewable energy. Ignoring the cultural shift to green practices would likely save these companies considerable amounts of money in the short term, but also contribute to their eventual obsolescence.

Don’t overlook the obvious

If innovation has an evil twin, a mustached doppelganger from a parallel universe, it would be groupthink. Commonly defined as a pattern of thought leading to self-deception and conforming to popular opinion, groupthink is as antithetical to innovation as it gets.

It has been complicit in bringing down civilisations and in the commission of untold atrocities. Paradoxically, one of the most famous illustrations of the limitations of groupthink is drawn from early 15th-century Italy, the epicentre of the Renaissance, an unprecedented period of creativity and ingenuity.

According to most accounts, a group of architects had gathered in Florence

in the early 1400s to compete for the commission to design the dome for the city’s unfinished cathedral, which is still considered one of the world’s greatest architectural achievements.

The architects, among the most accomplished in the world, were given a simple task: balance an ordinary egg on a flat piece of marble. Intellectually hobbled by the uselessness of the scientific principles or the complex equations and formulas they had mastered over a lifetime of learning, one architect after another failed to meet the challenge. The egg lay on its side until Filippo Brunelleschi, the eventual dome designer, casually tapped its fat end against the marble, flattening one side of the oval.

When his competitors protested, declaring that they could have done the same thing, Brunelleschi famously quipped that solving any challenge is easy – after you’ve seen someone else do it.

More than 600 years later, some of the brightest minds on the planet – and the businesses that employ them – are still falling victim to groupthink. The inability to break away from conventional thinking, to view a problem or an opportunity from a completely new perspective, remains a significant contributing factor to a lack of innovation in many modern businesses. Today, as in Brunelleschi’s era, innovation often means tearing down or disrupting the status quo. Making an omelette, after all, requires the breaking of a few eggs.

A new approach to innovation

Cisco has long been synonymous with innovation. Always among the first to recognise emerging business and cultural trends, our company has been delivering products and technology for more than 30 years that enable our customers to be disruptive and occupy the vanguard of their respective market sectors.



Cisco helped spearhead the influence of information technology (IT) in the modern enterprise, introducing networking equipment that paved the way for the personal computer revolution. Our routers, switches and wireless technologies, among the most powerful in the world, have fueled the rapid expansion of the Internet, which is now integral to the way billions of humans communicate, entertain themselves and conduct business. Today, we are at the forefront of digitisation, embracing the fourth wave of the Internet and working to connect people, processes, data and things.

Despite an unprecedented track record of innovation, we know that change is constant and inevitable and with that it's essential to constantly evolve our already ambitious innovation initiatives and practices in lockstep with a continuously evolving business climate. Augmenting existing practices, including frequent acquisitions and successful integration of start-ups with promising technologies, we have developed a multi-prong approach to sharpening our creative edge and to disproving the hypothesis that large companies are incapable of delivering meaningful and sustained business innovation.

Products and processes

At Cisco, we dedicate more than 10% of our revenues to R&D annually. We further encourage product-level innovation through hack days, brainstorming sessions that encourage engineers to reinvent or reimagine existing Cisco technologies or explore new product concepts. We also champion an agile innovation environment, anchored by a "fail fast" philosophy that accelerates the identification and, ultimately, the resolution of problems that can slow the innovative process.

We have found that policies that free our researchers from fear of failure encourage the exploration of bleeding-edge concepts and technologies. Aware that career advancement hinges on contributions to the bottom line, researchers at many businesses are discouraged from pursuing projects with high commercial potential but low probability of success. At Cisco, reaching the conclusion that a solution is not fit for purpose is not a sign of failure, but a valid end result in the pursuit of innovation.

Exploring all possibilities was a founding principle of Cisco CREATE (Collaborative Research and Emerging Technologies) our London-based innovation centre that focuses on finding effective and innovative technology-based solutions to some of today's most pressing real world challenges. CREATE acts as a hub for trailblazing applied research, with a focus on

technologies and market opportunities surrounding the IoT technology model. We believe innovation is best achieved through collaboration and partnership with relevant subject matter experts in an open innovation ecosystem.

We also believe that the process of innovation can be measurable and repeatable, and have established a regular, defined process for identifying, and managing innovative projects. Research and the recruitment of academic and business experts is conducted under a prescribed set of procedures. At Cisco CREATE we follow a bottom-up approach to innovation. It begins with a customer challenge or societal issue and explores ideas that address these needs. The delivery of externally validated Proofs of Concept (PoCs) keeps the innovation efforts focused on tangible benefits.

Culture

As important as technology is to the creative and innovative processes, at Cisco we recognise that people are the driving force behind meaningful innovation. We focus on creating the right culture and environment to foster innovative thinking throughout our organisation. And we have initiated multiple programmes designed to spark a spirit of inventiveness and creativity in our workforce.

The People Deal initiative, for example, provides employees with an open, flexible culture that fosters collaboration and the promotion of new ideas. Committed to fostering inventiveness throughout our corporate structure, we have adopted these ideals as the overarching principles of our human resources practices.

We are also breaking new ground in workforce empowerment with our Mentoring Trees. This initiative, based on the conviction that knowledge transference isn't just a top-down exercise, creates mentoring "trees" made of a mix of participants with various job titles and levels of seniority within the company. This approach is fostering

greater communication across all levels of the workforce, providing recent hires and young employees in particular with a greater opportunity to interact – and share ideas – with seasoned management and executives.

Equipping our employees with the skills to innovate is also a key part of our culture and the Cisco Innovation Academy is an on-demand virtual resource centre aimed to educate and inspire new ideas at all levels of the workforce. It focuses on skill-building across five key components of the innovative process: questioning, observing, networking, experimenting and associating.

Ecosystem

At the core of our business is the belief that innovation is everywhere. We are committed to creating a fertile environment for innovation that extends to partners, our customers and the overall landscape. We believe that innovation is infectious and self-perpetuating and by fostering a culture of innovation across the UK and beyond, we hope to spearhead a new era of creativity and inventiveness that will lift the fortunes of the entire ecosystem.

Our commitment to help transform the UK into a digital economy was the driving force behind the British Innovation Gateway, a series of initiatives and programmes designed to support and accelerate the growth of tech start-ups in the UK. To date, the BIG Awards programme has funneled over £400,000 of financial support into winning start-ups and mentored more than 60 companies. In addition, the programme has been instrumental in accelerating the development of numerous start-ups in the UK, helping these fledgling enterprises to attract millions of pounds in funding.

Core to our UK start-up programmes is IDEALondon, an innovation centre developed in partnership with UCL and DC Thomson. IDEALondon, shorthand for Innovation and Digital Enterprise Alliance London, seeks to provide an alternative to

the highly structured practices of more traditional acceleration programmes. IDEALondon, for example, does not exchange its services for equity in the aspiring start-up, nor does it limit participation in the programme to a prescribed duration. Instead, it offers a non-competitive environment designed to provide a collaborative workspace and targeted mentoring to support the most promising digital and tech start-ups in London.

Practising what we advocate, we are committed to pursuing ecosystem-wide innovation. Our initiatives not only incubate innovation among UK start-ups, they extend to the broader community including universities and established businesses from all sectors, and of course our customers.

Customer focus

We adopt a customer-focused orientation to innovation, focusing on bringing innovative solutions to businesses around the world, helping companies of all sizes and from all market segments stretch the boundaries of what's possible. We work with our customers to uncover new business value by encouraging curiosity, thinking differently and challenging existing assumptions.

Innovation is distributed through a cascade effect - we work to infuse our customers' business models with innovation through our solutions and services, which ultimately impact the lives and productivity of our customers' customers.

Our track record demonstrates the reach, diversity and impact of these innovation initiatives. We recently helped a healthcare provider to dramatically improve the efficiency and quality of its care by linking nursing and residential care homes to a 24-hour Telemedicine Hub. This provided patients with face-to-face consultations using our mobile communications technology, the healthcare provider saw a 45% decrease in hospital admissions, a 60% reduction in hospital bed days and a 70% reduction in the use of accident & emergency services.

Meanwhile, in the retail sector, our technology and analytics expertise recently assisted a property owner in optimising the management of its 16 shopping centres. The property owner used location intelligence, such as real-time data on foot traffic, from our Connected Mobile Experience platform to identify the highest traffic areas in each centre. The information was leveraged to maximise rental rates and advertising space, as well as fine tune security arrangements and cleaning schedules.

Not just for start-ups

Cisco is directly refuting the notion that innovation can only be found within start-ups. Not only are we introducing new initiatives and incentive programmes to encourage creative and innovative thinking within our workforce, we are exporting out its innovative spirit to the larger ecosystem.

More importantly, we are dedicated to assisting our customers unlock their innovation potential by helping them to seize upon emerging technologies or societal shifts to create new business value.

A one-size-fits-all approach to innovation does not exist. But that shouldn't get in the way of every company, even the largest corporations on the planet, creating their own ever-evolving blueprint for building a system or process capable of delivering a steady and sustainable flow of inventiveness and creativity.

Innovation is the new business currency.
And we are on a mission to infuse the
spirit of innovation into every corner of
our ecosystem.



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