A Fresh Perspective on Innovation: The Braudel Rule

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Introduction

This briefing paper synthesizes the clearest management lessons from the patterns of business innovation and its impacts on customers and competition over many decades. It points to some reliable navigation rules to sustain and build on innovation success. The challenge few companies surmount is how to keep taking their innovations beyond the “next killer app”, hot product, existing market leadership and dynamite customer experience. For many, the old adage of “Innovate or Die” becomes “Innovate and Die.” Innovation is not an annuity. Leadership implies followers and this is a time of very fast pursuers, most of which fade or lose direction, but a few put all the Innovation building blocks together today for success tomorrow…. And the tomorrows after that. The focus of this paper is how they do so.

Innovation comes from a firm’s ability to Invent, Attract and Extend some new offer in the market. Invention readies a new creation. Attraction augments Invention by creating new value, both for existing and potential customers, for the company in its revenues, margins and capital efficiency, and for partners who help leverage it to mutual benefit. Extension builds on Attraction to add new dimensions of value, and to link together and broaden the diffusion of individual products, services and relationships, with further Invention a cumulative contributor.

Innovation is the set of organizational capabilities that bridge the very different areas of focus, disciplines, skills and time frames that these involve.

**Figure 1: Innovation is a Set of Capabilities**

**INVENTION**

Come up with the different

- Create the new, through R&D, product development, technology, service and process design, patenting
- Provide capital investment for future growth
- Grow strong inhouse and collaborations
- Build intellectual property

**ATTRACTION**

Generate and boost the benefit

- Create new value
  - For the customer: “better than”, “different from”, “special”, “good buy”, “for me”
  - For the company: revenues and cost structures, capital efficiency
- For partners: mutual benefit from growth
- Focus marketing, sales, distribution, service

**EXTENSION**

Sustain and expand the impact

- Exploit the expansion of choice spaces opened up by the convergence of forces of market expansion, technology and global sourcing
- Expand to become indispensable and ordinary
- Refresh and add to escape the novelty and commodity traps
The bridging doesn’t require new forms of structure, functional divisions or modes of collaboration but is more a shared orientation and agenda as to how each area of focus leverages the others. Without this bridging, Invention has historically too often consumed R&D budgets, launched new products and exploited new technology but failed to capture and keep customers. Successful Attraction similarly often hits competitive roadblocks in sustaining market differentiation in customer value and avoiding the commoditization that increasingly marks a global era of integrated supply chains, overcapacity, and new competitors.

Finally, even the most noted innovation successes that get everything right for decades somehow erode as they reach the limits of their heritage. Sears, Xerox, GM, Dell, Blockbuster, RIM (Blackberry), Gap, Nokia, and AOL are just a few instances. They seemed invulnerable and were models of the future; now they are just the past. In most instances, such ultrasuccesses became ultrafades even while still outstanding in the capabilities that helped them build their success; they over-relied on these, unbalancing their adaptive resource base. (The Value Path, 2012, provides detailed case studies and analysis.)

Here are just a few instances. Sony and Xerox continued to invent and brand standout products but operated as if these would sell themselves with only limited need to develop their marketing and other Attraction capabilities. Dell dominated the entire PC industry, differentiating standard products through powerful marketing, service and personalization. It lost momentum and expansion across the new markets and customer expectancies fueled by the widening impacts of design and style that marked Apple and Samsung, and by the now obvious shift from PCs to mobile smart phones. Gap’s management practices took away its design invention edge. RIM found that more Invention could not offset its inability to regain customers as the market it helped to shape slipped away from it.

The focus of this paper is on mobilizing the capabilities to sustain, not just build success. It provides a practical framework for making sure that they mesh, mutually leverage each other, and adapt to move with the rhythms of external change. The dynamics of innovation are apparent in new news for business but very old news for historians:

Progress and development in society – and hence sustained innovation in business – come from changing the limits of the possible in the structures of everyday life.

This constitutes the Braudel Rule, a summary both of the dynamics of innovation over the long term and the discernible principles of both past, recent and emerging successes across competitive arenas. The rule derives from the work of Fernand Braudel, widely recognized as one of the most influential historians of the past one hundred or more years. His work translates powerfully and simply to the context of company innovation, with the Rule as a focusing lens. (Baudel’s work is embodied in Civilization and Capitalism, 15th-18th Century (1979).)
Invention creates something extraordinary and moves it into the marketplace of customer options and choices. That can generate many successes, but the innovations that take hold and get adopted by a broadening customer base become the new ordinary and often household phrases, like “FedEx this package”, “Google this” and “Text me.” This may take a decade or more, but when they change these highlighted words in the Braudel Rule, they have a pervasive impact and diffusion: the limits of the possible in the structures of everyday life. They shift customer expectancy for everyone, not just direct competitors; ones whose offers remain inside the previous limits become the exceptions to a new norm.

What has become more and more apparent and consistent over past decades is that Attraction through Invention-driven innovation is being displaced by Braudel-led innovation.

Figure 2: Two Innovation Paths, Your Choice

Braudel-led innovation starts not with Invention, but from identifying an opportunity to extend the limits of the possible in everyday business or end customer life. The company pulls from existing or new inventions, products, and services to begin to build a Braudel suite that opens up a new "possible."

The metaphor of a suite invokes what a first rate hotel surrounds its straightforward basic offer of a room with: a concierge who provides recommendations, Wi-Fi, gym and spa, information and bookings, transportation on call, meal services, laundry and the added
“personal touch.” This is a valid analogy for much of the use of technology in Attraction: building the customer experience, removing limits of location via mobile, enriching the variety of on-call extras through online information and apps, using data analytics to know more about the customer and personalize offers, etc.

The basic suite is often given away free, to attract a large number of customers and open up offers of premium versions and extensions. Google’s consumer customers use its Search, Maps, Earth, Chrome, YouTube, Office and mail services with no upfront or usage payment. Most such initiatives target customer retention, rather than “acquisition.” The company then goes on a continuous quest to expand its Braudel suites through focused Invention and Attraction and a resulting flow of new offers and options.

Invention-driven innovation naturally looks to build revenues directly from it. Braudel-led innovation will equally naturally shift to pricing that encourages fast and widespread expansion as a base for wider and longer revenue and margin flows. It raises an issue that is almost entirely neglected in the expert and exhortative literature on innovation: what do you price and what do you give away?

We use the term Braudel Rule as more than a metaphor and less than a literalism. It summarizes a perspective on the historical dynamics of change. Braudel focused on “la longue durée” (literally the long duration, but time-horizon captures it better) rather than “event-driven history” in his meticulous and far-ranging studies of the evolution of capitalism and its contribution to social development and economic growth.

Non-ideological and pragmatic, he showed that it is in the structures of everyday life that innovation has more than just a transient and occasional impact. Innovation is sustained and diffused across society by the degree to which it changes the limits of the possible. Incremental and easily overlooked changes can accrue to have more impact than loudly trumpeted bold ventures.

A relevant business example is the credit card. This is absolutely core to the nature and evolution of the entire online economy, but there was no sudden Magic Plastic Money buzz that had customers and companies racing to respond. It is clearly an instance of the Braudel Rule and of la longue durée; it took forty years for it to become the everyday and it is evolving by the year, from a physical “card present” transaction to card on file, contactless payment, digital signature and tokens. The question for management action here is should a firm today target its Innovation for big hits now or for sustaining value for company and customers over broader vistas of time, adoption, application and impact?

We derived the Braudel Rule two decades ago, drawing on the compelling explanatory power of his analysis: this is how innovation works and has worked since the Middle Ages, first in Asia, then Europe and the Americas. Braudel does not offer prescriptions but we found his work captured the strategies, evolution and impacts of the most familiar transformers of business limits, such as Ford, Sears, FedEx, Toyota, Wal-Mart, Dell, Southwest Airlines, Amazon, Netflix, Facebook, Apple, Expedia and Google, as well as lesser-known ones like Zara, Li & Fung, Bharti Airtel, and Alibaba.com.

We translated the Braudel insights into a more prescriptive rule for innovation. This was articulated in Shaping the Future (1991) and was the core proposition in the book published
in 2001 on the coming impacts and opportunities of mobile, *The Freedom Economy*. It has been fairly widely validated, tested and applied in research and practice in the field of mobile services development, particularly in Scandinavia which was the pace-setter in the shift from phone calls to digital applications. (The projects have been spearheaded by the noted Finnish researchers, C. Carlsson and P. Walden.) We have extended the Rule as a result of our work, summarized in a 2012 book, *The Value Path: Making Innovation Part of Everyday Business when the Customer Makes the Rules*, on the shifting nature of “value” as a function of the choice spaces opened up for customers and providers by the converging forces of trade liberalization and deregulation, technology and global sourcing capabilities.

What Braudel’s work does not address is the invention of the customer, a direct result of this set of historical forces. (See *The Value Path*, 2012). The customer is an invention in the sense that in the eras of extensive industry regulation, trade barriers and oligopolies, buyers were subscribers, users and consumers. Value was limited in its dimensions, often centered on relative price, quality and “enhanced” features.

“Customers” have choices, can get the information they need to make them, and have the opportunity and right to exercise them on whatever basis they want. This increasingly expands beyond the product and service to what is captured by the useful but near obsolescent term the “customer experience.”

When customers can choose payment services from, say, Wells Fargo, Apple, PayPal, and many new online players, how they pick the one for them becomes more and more a matter of value being shaped by the totality of their expectations about what these can contribute to them through a shift – changing of limits – and a relevance – the structures of their everyday life.

**Braudel Suites, Expectancy Shifts and App**

These two constructs – the limits of the possible and the structures of everyday life – are illustrated again and again and again by business examples. A simple instance is the ATM, which did nothing “new” and was highly limited in its functions: dispensing cash, providing balance information and accepting deposits. But it transformed how we could get money at any time and in any place, removing more and more limits of location, banking hours, and currencies when traveling abroad, and dealing with emergency needs.

“Stop by the ATM” became a phrase in everyday life. It is now routine and integrated into diurnal rhythms. (Just Google the word, if you’re not quite sure what it means. You can locate the nearest ATM on your smartphone.) The once extraordinary Invention of a new technology and massive transaction complex is diffused across the ordinary; there is nothing exciting anyone can say about an ATM. It is a suite of services rather than a “system” or “network” or “product.”

Much of Attraction historically was built on the skills and methods of traditional market research and development, branding, sales and advertising. Now it adds the intelligence of a concierge, executive assistant and adviser. The product may remain the same and services
add to it, but at some stage its success in becoming the customer’s choice among many options shifts from its being “better” on comparative ratings of Attraction, such as price, features, quality, warranty, financing and the like, to becoming “different” in how the offer fits into the customer’s expectancies.

These are the broader mix of preferences, assumptions, sense of personal relevance, self-and community-identity, expectations, and even sheer prejudices. It is expressed in terms of “I”: what I am looking for, what I expect to find, what I don’t accept, and what I care about.

The market for organic and low fat, low sodium foods was fueled by customer expectancies about health, quality, additives and chemicals. Food companies such as Nestle and General Mills and mass retailers such as Wal-Mart shifted their own Invention in response to the power of expectancies.

They did not create the market; it emerged with no central driver but a general sense of people wanting food choices that were outside the limits of their possible and available only from expensive gourmet stores, farmers markets and local providers. Expectancy pushed large companies to launch Braudel-led Innovation; Expansion directed Invention, not the reverse that has marked product-centered growth.

A byproduct of online commerce and deregulation has been that variety of pricing is now an expectancy, not a fixed metric. When Priceline invented its name-your-price “reverse” auction, this was a patentable business method invention on which an explosive growth firm was built. Now, it this is just one among many everyday schemes. Some of the other shifts that have diffused across the structures of everyday life are that information-based services should be free – newspapers, guides and search for instance – that shipping should either be free or a very small fixed cost with payment for expedited service, and that returns should be free of handling charges. Customers expect that they will not be hit with fees that don’t reflect value to them. They also assume payment options for all credit and debit cards and in some instances point of sale transactions, PayPal, Bitcoin and wallets.

Braudel-led innovation is increasing the power of expectancy. This includes many factors that directly relate to how people – rather than just “customers” -- consciously orient themselves in considering options. There is a cluster of expectancies about products and services. These have changed quite radically as an effect of many firms providing new processes, promises and services in terms of expected speed of ordering and delivery, access to account and shipment information, guarantees, personalization and convenience.

Other elements are broader social expectancies. Companies’ reputations and relationships are increasingly affected by issues of their providing healthcare to employees, their policies around gay marriage or oversight of labor conditions among their Asian suppliers. Family and community concerns can cohere very quickly to affect “brands” and choices of companies to focus on or avoid. These expectancies reflect both the growing choices people have, and their ability to search widely, compare reviews and be alerted to information. Monsanto was largely unknown to consumers as a seed company. Now, expectancies about safety, science, farming and treatment of farmers are having a wide and deep impact on its
ability to exploit its GMO inventions. A major and widespread emerging expectancy is simple: foods should list all their ingredients.

Braudel suites are, of course, often built on and around “events” such as the issue of a patent or the launch of a new product or service but this is the start for making an impact on the longue durée. The difference between la longue durée and event-driven history is captured in the fact that 1492 and 1776 were just dates -- until we retroactively labeled them as transformations. It is also wittily pointed to in the apocryphal movie line “Men of The Middle Ages, we are about to begin the Hundred Years War.”

The iPod, iPhone and Google’s PageRank algorithm are iconic examples of 1492 and 1776 business equivalents. They hit the market with a flash but evolved and still evolve by incorporating more and more disparate expansions aimed at la longue durée. Braudel shows the “secular” cycle for the historical changes that reshape society are in the range of 120-200 years. We tend to treat business ones as near instant, but the waves of “eras’ and company ultrasuccesses and this year’s revolution of the century seem closer to twenty; for all the “now” diffusion of e-mail, the Web, messaging, cloud computing, they all date way back in terms of Invention. They were all seen as technology solutions looking for a problem, “won’t happen” and “who needs them?” Now the question is different in expectancy: “Where’s the app for that?”

Consumer banking is an expectancy-driven example of the nature of suites in general and “apps” in particular. Industry innovation has largely and reactively been product-centered: new types of account, small business packages, loans, financial “instruments” and fee-based services. While this is changing rapidly with the customer experience the priority, banks still tend to speak of “channels” – mobile versus branch banking and “multi-channel” integration – consumer versus small business banking, fee-based payments and transfers, and the like. This reflects the inherent tendency of Invention-driven innovation to use the language of the company and extend it out to the customer. Customers don’t think in terms of channels; they want them to disappear. They serve only as a limiting factor in everyday life.

This orientation on innovation has left open opportunities for non-banks. There is Braudel-led innovation in every area, with apps the building blocks of suites. A Washington Post headline captures the shift (August, 2015): “Need Help With Cash? There’s an App for That.” The key words here are “help with cash” not, say, “a new bank account plan.”

The apps include simple single-function tools plus rich suites that link to banks and financial service provider sites and add apps. Examples of these include smart algorithms – labeled in the technology Invention arena as “cognitive computing” – to optimize customers’ cash flows and transfer money immediately to and from savings. Other routines help freelance workers with volatile pay patterns smooth out their expenditures and be alerted to likely problems in the coming months.

There’s an app now for just about anything you can dream up as useful, helpful, convenient or informative. Consider air travel, where the reservation is increasingly made online but then you are on your own – until you find the apps for flight tracking, sending alerts about delays and messages to families or colleagues, airport maps, “agony” reviews from passengers who have taken the same flight, lounge locators, real-time profiling and tracking of your circadian
rhythms to suggest dark/light schedules, language translation for dealing with foreign airport signs and procedures, and recommended packing lists for travel abroad.

Apps are a new form of modular service, meaning they can be plugged into many suites. The term has moved from tech-talk to everyday household use in a very few years. A key issue is that not a single tech company led the diffusion. They have come from individual and small developer teams. They are innumerable but unbranded. They rely on the tech firms' inventions, including a flood of bizarre names for tools, such as Python, Toad, RSS, Elastic Beanstalk, and Raspberry pi. They are Braudel-led. They grow through everyday adoption on smartphones. “Mashups” link to Facebook, Expedia or Amazon. “Bidders” on auctions on eBay are often apps that make automatic offers and exploit last second opportunities and pricing tactics.

As individual apps these are largely useful odds and ends. Provide links, however, to travel sites for hotels, cars and airline services, banks, restaurant and other guides, Facebook, messaging, and medical services and relevant personal profile and history, and they converge as a suite of indispensable help and value.

Clearly we will see more in the near future. An airline analyst pithily summarized this: “On the stairway to mobile app heaven, we’re still on the first few rungs.” In managing finances, apps are equivalent to convenient, useful, helpful, timely, responsive and personal – the very opposite from customers had come to expect from banks. The new suites of financial apps that are increasing by the month rely on the banks’ transactions systems but those are becoming little more than a background utility. PayPal offers many suites for small businesses, handles international payments as simply as a credit card purchase – and is aiming to be a licensed bank. Users of its suites neither know nor care which banks’ transaction and payment systems they rely on. PayPal is their Braudel brand.

“Suites” stretch far beyond the consumer space. Many farmers spend less and less time on their tractors. They and their farmhands use their iPhones and iPads to monitor and report on acreage in real time (and check their bank transactions and listen to music.) A complex set of tools behind a simple interface provided by a Google-funded startup, Granular, combines that collected data with information gathered by drones, self-driving farm machinery supplied by John Deere and weather satellites. This is rapidly, radically and pervasively changing the basics of how farms of today are run.

All these fragmented, dynamic developments and their impacts are generating an environment of Braudel diffusion that is much more fluid and less tidy that the traditional models of “industry” competition, “market” planning, and “product” lifecycles. Its main rhythms are that some innovations become more than just standalone purchases and unobtrusively are made integral to daily life. They help create a new “ordinary, are mundane and increasingly indispensable. Many get established as household words, not trademarks. Most far-reaching they shape expectancies that all firms have to meet, regardless of their industry.
Figure 3: Braudel Diffusion

Apple represents an obvious instance of Braudel diffusion. The iPhone is no longer a single product innovation launched and valued via the old criteria for Attraction that put it in competition with other Invention-driven devices from Samsung, HTC and others. Like Google and Amazon, it is a resource that customers draw on in so many trivial, occasional, core, new, old, work and personal elements of daily routines. It is this diffusion that lies behind the emerging leadership in Innovation of “platform” companies.

Convergence of Forces of Disturbance

The expansion of the choice space is driven mainly by three historical forces: (De)regulation and trade liberalization, Technology, and Modular multi-sourced capabilities.

These are historical in the sense that while they vary in their pace and tempo of impact, with intermittent pauses or backtracking, the long-term direction is towards “More.” More trade liberalization and removal of regulatory boundaries. More platform technologies, ones that enable the building and deployment of enterprise infrastructures that mesh networks, computing, devices, and information. And More modular – building block -- multi-sourced capabilities that the firm can access and link into its infrastructures and delivery systems across geographic regions, providers and partners.
Each of these forces has its own convergence. Technology in particular is currently paced by four main areas of development, with three more accelerating behind them. These come together in enterprise technology platforms. We are increasingly witnessing the combined impact of Mobile services (the device, network and data plans) with mobile apps (all the simple downloads on offer), Social media, Cloud computing, and Web APIs Application Program Interfaces – digital connectors passing messages, instructions and results). Close on their heels are Big data, The Internet of Things, and Cognitive computing.

Trade liberalization is at a potential pivot stage of evolution with the TPP agreement transferring rights and market power across many sectors, nations and corporations. It has many opponents but it represents an explicit convergence of hundreds of regional and nation-to-nation agreements. All the elaborate and far-reaching industry regulation of TV licensing and broadcasting, telecommunications, cable TV and Internet services, publishing rights, news services, film production and distribution, content ownership and the like are converging on just digital “media.”

Multi-sourcing of capabilities is converging on organizational forms that are not described in terms of structure but demand labels like “virtual”, “networked”, “sharing”, and the “gig” economy of hourly labor accessible on demand and for a given hour and type of work. Journalism is now 1099 gigs paid by the word rather than W2 IRS reported salaried employment.
Convergence enables and reflects diffusion and hence choice, value and expectancy. Starting in the mid-1970s and running into the early 2000s, a result of the forces was the shift in customer expectancy with regard to price and quality that redefined manufacturing and service, most obviously in the auto industry. Companies like Wal-Mart, Dell, Southwest Airlines, Toyota, and Zara, taught customers that they could get, and they came to expect, lower prices without sacrificing quality. A TQM (Total Quality Management) adage was “Quality is Free.”

Behind the scenes were other companies such as FedEx and Li & Fung inventing technologies and processes that took waste out of the system by tracking parts and products as they moved. They helped make quality a natural byproduct of manufacturing and supply chain processes. For the most part, customers didn’t touch and feel the new information technology behind the diffusion. They “saw” it in the price and quality of the products they bought. Few people realized the branded shirt they bought at any nation-wide retailer was sourced in materials, coordinated across hundreds of elements in the global manufacturing and assembly stages, and then shipped and delivered through Li & Fung’s supply chain platform.

Today, thanks again to the continuing momentum of the forces, companies like Google, Amazon, Apple, and Facebook have generated waves of Braudel diffusion, catalyzing a whole additional set of customer expectancies. This time, the technology is in the customer’s face and not just behind the scene. In addition to lower prices and better quality customers have been taught to expect and be able to get the information they need, the content they desire, answers to their questions and immediate interaction with their retailer, airline, bank, media company, insurance company, and just about anyone else, whenever and wherever they want. And of course communicate with whomever, wherever and whenever they want and find an app for whatever they want to add.

Google contributed to the demise of paid news subscriptions by fueling the expectancy that information is free, at your fingertips and very easy to find. Free and open access Wi-Fi is part of an expectancy that is diffusing across hotels, conference facilities and airports. It is an element of Starbucks Attraction as a component of its suites – the package of experience, ambience, and specific items on offer – and has changed the limits of the possible in doing homework, working or checking mail while on the road.

An obvious message to business managers is that when there is a Braudel diffusion in some choice space that doesn’t connect with your own, don’t assume that your customers won’t expect the equivalent from you. You won’t be able to duck it when they do. That your firm offers reliable shipping and 5-10 day delivery time at a fixed price that is “reasonable” though high for small purchases and heavy items doesn’t override the expectancy that it should be reliable and fast and free. A lot of business is lost in online shopping when customers see the cost and simply leave the site. Customers now expect Wi-Fi in bars, airport lounges, hotels and waiting rooms, not as a product and definitely not as something they must pay for. Many good hotel deals are dismissed because there’s a $15 daily charge or it is not provided. Wi-Fi is now a diffused expectancy, not a premium option. This will surely be a driver of the inventions, attractions and extensions of the Internet of Things.
One instance of the impact of such diffusion is captured in a favorable review of an online firm that guarantees the lowest price for everyday items. It provides excellent customer value but misses out substantially on meeting the expectancy that was once impractical but now part of the decisions in everyday life: “In an era when Amazon has trained us to expect things to arrive in two days, this [a week] seemed like a painfully long time to wait for such a basic item.” The term “trained” is resonant here. It goes beyond just offering something extra. It conditions broad assumptions of standard practice that influence specific choices.

The Emergence of “Platforms”

Platform companies are the ones that exploit the convergence of all the forces. This has emerged as a very new term in the business vocabulary. They are making all elements of technology the new foundation for their entire business structures and activities. In more and more ways, their enterprise platform is their business strategy in that it bounds or extends their opportunities and ability to make the forces of change their ally and not their threat. They combine an Innovation bridging capability that is aggressive on Invention, effective in Attraction and widening in Expansion across the structures of everyday life. The bellwethers here – firms that provide the first examples of a major potential path to transformation of some basic of business and competition – include Google, Amazon, Facebook, eBay/PayPal, and Apple. Behind them are many smaller and less technology-paced firms, with more to come.

They are able to incorporate a flow of inventions – Google, for instance, is a leader in the driverless car, Google Maps, new power utility services, and media (YouTube). They use their infrastructures to add products and services through acquisitions (Android, Motorola, and Nest). Facebook is no longer just a communication forum. It continuously expands in every direction: technology, communication, community, small business sales sites and advertising, and like the other platform players it is targeting just about every element of everyday banking, payments, personalization and co-providers. Amazon, Facebook, Apple and Google are all converging on the customer and not operating within industries and channels.

This is the central advantage of a platform perspective based on convergence and expectancy. It ensures the firm is positioned for extension as its core value creator, catalyst and enabler. The four bellwether firms that have brought it to attention are all startups that became giants: The battle for dominance among these Titans and Godzillas will be both intriguing as a spectator sport and intensive in its competition.

Platforms: USAA, FedEx and Boeing

USAA is a lesser known platform company than Google. It serves the financial needs of U.S military and their families. It has no branches, just its San Antonio home office with over 14,000 member service reps who staff the call center. Like others, but earlier than most,
USAA began building sophisticated apps to augment and personalize core services. For instance in 2009 it launched Deposit@Mobile that allowed customers to make a deposit by taking a picture of a check. Customers now expect this from all banks.

In 2010 USAA made an expansive Braudel shift. It reorganized its call center and all other customer-facing services around members’ life events rather than USAA lines of business: the birth of a child, buying a car or house, relocating, retiring or handling a death in the family. It partners with companies like TrueCar, through a venture capital stake and with Cartus Corp for relocation services. They link their services through APIs.

USAA’s Auto Circle offerings cover every step of the car buying process from the upfront research, to finding best prices, to a guaranteed offer from TrueCar’s associated dealer network, and, of course, to knowing from the start the insurance cost and making financing an easy step. It really does take the hassle out of car buying. “Hassle” always reflects some limit of the possible.

The process is “transparently” conducted through any combination of mobile apps, website services and call center interactions. Transparent means that you are never aware of the steps, systems, processes and technology plumbing and network pipes. USAA’s Home Circle does much the same for every step of the relocation process from finding, purchasing, renting, selling and insuring a home. The firm is rapidly moving into the cognitive computing space. Starting in 2014, staff members began tutoring IBM’s Watson with lessons from their experience with their “members” so that it can better assist military personnel transition to civilian life and find jobs that match their skills – another life event.

FedEx has long been a platform company driven by Braudel-led innovation. That goes to its core. It was founded on delivering packages overnight. That concept evolved to its very essence of performance and value being guaranteed delivery. Along the way it worked with technology partners to invent the printing of continuous bar codes, handheld scanners and onboard communications. The combination of those inventions helped FedEx track products as they moved. It used its platform to expand internationally, move into freight, and become a major player in ground using contract drivers, a space dominated by UPS.

Through the acquisition of Kinko’s, FedEx is now in the retail printing and copying business, known as FedEx Office. It has print apps for the iPhone and Android devices that allow customers to manage printing jobs from and to anywhere – an obvious unblocking of limits of the possible. Documents that are saved on a customer’s mobile devices, in emails, or in several cloud storage suites like Box, Google Drive and Dropbox - note the variety of partners supported by simple APIs - can be sent to a FedEx Office store to be printed. Customers can pay for the print job from their phone and pick it up in person or have FedEx deliver.

This is all enabled within the same infrastructures and processes that created overnight shipping and were extended to ground delivery. With FedEx’s platform, it is a practical and inevitable step to print all kinds of parts and products, not just paper documents, with 3D printers piloted at FedEx Stores. Customers will be able to design the item through software
such as Google’s Autodesk, pull it from an online library of 3D CAD/CAM specifications with their smartphone, store the images in the cloud, pick up the finished product at the store or, again, have FedEx deliver it to a supplier in China or a customer in Munich, or both. They can even use one of the many iPhone apps that scan an object and automatically produce the 3D CAD files.

Platforms are not just a matter of apps. Boeing is one of the many innovators in creative and useful apps for its business customers. It makes a lot of planes and a good long-term profit from their sale, albeit often buffeted by short-term economic turbulence that affects the capital expenditures and capacity needs of its customers. Once they buy a $200-400 million airliner, those customers depend on Boeing’s knowledge and parts to keep it flying.

Boeing recently worked with several carriers to tailor a suite of apps for the iPad that help airline technicians perform routine maintenance and diagnose aircraft issues faster and easier. These apps provide instant access to the maintenance history of an aircraft, manuals, part numbers and other critical information to resolve maintenance issues plane-side and collaborate with co-workers located elsewhere. As a result, airlines can enhance real-time regulatory compliance, reduce flight delays and cut operational costs. Boeing is assured that its certified parts are part of the resolution, all by changing the limits of the possible in the life of an airline technician.

These apps are logical components of Braudel suites, but are they part of a larger Boeing platform and can they be leveraged by the airlines as part of an extendable platform? That is the question all companies should be asking as they roll out apps. To take full advantage of what the plane has to say (the Internet of Things) and do more and more sophisticated diagnosis (cognitive computing), both Boeing and the airlines will need to be platform companies. A 787 captures around half a petabyte of data on an intercontinental flight and is continuously transmitting key information in real-time via Internet Web Service tools. This opens up almost limitless opportunities to build suites of diagnostic, alerting, planning and intelligent agents.

Aerospace companies are already aggressively exploiting 3D printing, for small parts that weigh less, are stronger and use 10% of the materials of existing ones – and that can be printed at a remote location with no shipping. The ability to diagnose and print without dependence on inventory, shipping and warehousing is practical today but bounded by the limits of the possible materials, print speed and part size. The likelihood of most of these limits disappearing within five years is at least 50%. The ten year conservative estimate is 99%. The evolution will transform the everyday life of airlines and aerospace firms.

Which is better positioned here to be a leading player in airplane 3DP: FedEx or Boeing? A few years ago, this would be answered mainly in terms of structure, players and advantages. Platforms blur and even dismantle industries. Is this best defined as manufacturing or logistics. The question is an open one for us, since we just don’t know. Whatever the outcome, this is the question that will determine a firm’s opportunity space and limits to innovation.
Innovation as a Bridging Capability

Discussions of innovation too easily slide into verbal Muzak, conceptual babble and rallying cries. The call for collaboration, creativity, risk-taking, courage, thinking outside the box (but the box remains in place), skunk works, the next X Way (Google, Apple, etc.) and be like Steve Jobs Leadership are all part of the Innovation recipe (Add a cup of R&D plus a pinch of intrapreneurship). Certainly, all these help leverage talent and commitment. But the historical nature of Innovation as impact rather than intent shows that there is no cookbook.

Invention remains vital. For the past decade, the focus on Web-based and convergent network-centered technologies has fueled immense Innovation, but not necessarily by its creators. Now there are strong signals that we are moving to a phase of the “new” that can meaningfully be termed from the Web era to the era of Intelligence. The Internet of Things adds intelligence to household appliances, car parts, products as they move and medical prosthetics. Biotech is obviously more than just inventive but likely to penetrate every area of human activity. New inventions in very short distance, near-field telecommunications, white space wireless and Wi-Fi in the sky will enable entirely new innovations and diffusion in capturing and using intelligence. Our focus on Braudel-led innovation and diffusion in no way downplays Invention, which so often makes it even practical to target a limit of the possible.

That said, Invention-driven innovation doesn’t seem the best option in reaching any large customer base. It can impose many restrictive perspectives and ways of thinking, working and talking that narrow opportunities and underestimate value shifts and the power of expectancies. It took many years for Google to lose its image as an engineering culture, with high turnover and reported frustration among the marketing staff. Now, it is both a development and marketing powerhouse, with large resources committed to bridging the product design/development and customer expectancy/value elements with all of them brought together as interdependent not parallel processes.

Bridging Invention and Attraction in itself requires bridging technology development and use. Marketing, Sales and Advertising departments were often self-consciously technology-innocent and “creative” in their identity and processes. Now, while the IT function may play the lead in technical and project management of convergent technologies in social media, mobile apps, data analytics and Web operations, the driver in their deployment and leverage has to come from the customer-facing areas of the business.

In firms that are aggressively pursuing the innovation opportunity, that is already well under way. Power – and budgets – are moving from the CIO’s sphere of discretion and authority to the CMO. The creative artists of Marketing are becoming very adept techies in their own right. The artists are proud nerds.

In many organizations, the IT function is more and more marginalized, reflecting a lengthy problem of identity and role in linking business and technology; nerds don’t easily loosen up and become artists. Now, the two are not just linked but fused. The combined historical impact of the Braudel Rule and the power of expectancies make technology convergence more than just an IT issue. The architecture of the enterprise technology platform is a business foundation, not an operational necessity. Who leads the governance and
oversight? The platform leaders are leaders by the very fact that they have found effective answers. That’s very much a matter of top management understanding and resource prioritization.

The most far-reaching bridging is the degree to which all the forces and factors we have discussed in this paper validate the need to view innovation in terms of the Braudel Rule to guide priorities and strategies. A new label like this one can often seem – and be – a gimmick and we wish we could find a plainer but still communicative term. But Braudel-led innovation is the agenda for today to be successful tomorrow and Braudel diffusion for successful every day thereafter.

The issue for management consideration that we hope our analysis makes relevant is: Is your firm positioned for Braudel diffusion as the competitive differentiator in coming years? Once the answer is a definite “yes,” then there is a rich body of experience and insight on the specifics of building Innovation bridges and capabilities. If it’s a “not sure” then the potentially circular Socratic dialog follows: Are you sure it’s fine to be not sure? What makes you unsure and what do you need to know to be sure either way of yes and no?

Our analysis has focused on the Braudel-led path to innovation from the customer end. It applies just as much for companies’ exploitation of new choice spaces: shifting from a supply chain to demand chain, sourcing capabilities, or removing corporate limits in everyday collaboration; virtual teams, location-independent and dispersed geographically are already the everyday of product development, consulting projects and software creation. In such areas as HR, apps are being deployed to make everyday working life easier, smoother and more timely in information flows. We focused our examples on a few better known consumer example for ease of presentation and communicative messages.

In business to consumer, business to business, large, small, diversified and global organization, if Braudel diffusion is the end target then Invention and Attraction must be positioned to accelerate the pace and scope of movement along this value creation path, with platform thinking a primary imperative.

The final lesson from the patterns of Invention-driven and Braudel-led innovation is the one that demands that companies go beyond thinking outside the box, where “box” means industry, company organization, market, customer base and competition. There is no box to be outside of. Companies that feed into the shifting expectancies and hence shifting value dimensions across expanding and new choice spaces can pop up, die or explode in growth very quickly. Startups and entrepreneurs in large or small firms exploit the forces of Liberalization, Technology and Modular capability-sourcing to create very large operations on a very small employee base, capital fixed asset investment, and low technology investment.

Examples are everywhere now. Tiny Facebook left the dominant online players as faded memories of antiquity: AOL and Myspace. But it did nothing new in terms of technology. It used standard HTML Web tools and RSS to link and update all its communications. Uber has no inventions driving it. Its existence rests on the lowering of local boundaries of taxi licensing; the use of standard technologies like GPS, mobile apps, and cloud; capability sourcing for handling behind-the-scenes payments; and sourcing contract drivers on demand.
who bring their own cars and pay for their own gas. Traditional cab firms will find it difficult to compete against the new expectancy that a cab should be as easy to order and deliver as a pizza.

Google and Amazon are a little different; they were built on powerful technical and process inventions and they continue to invent by the hour, to the degree that they dominate many technology fields of service. Amazon’s share of the massively growing cloud computing market – information technology turned from capital intensive operations requiring cumbersome and overloaded IT organizations to computing as an on-demand everyday utility – is larger than the next 15 players combined. It is easy to overlook the many other search firms that were larger than Google, the thousands of online retail sites among which Amazon was just a minnow amid tuna, whales, and sharks.

Companies of any size and in any sector must get rid of box thinking. Design a platform strategy that allows the addition and extension of many and any mini-boxes. Forget about “industry” competition. The term is irrelevant to customers, as Expedia shows. You book your trip on Expedia and choose the deal rather than the airline. Throw away the idea of customer “needs” and market “share.” Braudel diffusion turns needs into expectancies and markets into choices regardless of industry label.

Platform companies thrive in a Braudel-led world that is Innovation-thirsty – the next limit of the possible, the next suites and the next impact on everyday life. Increasingly, their competitors rely on blocking the forces of disturbance. Cable TV is losing its franchise to Netflix, Google, Amazon and other platform-based innovators. Netflix was a tiny startup that began the self-inflicted transformation of mighty Blockbuster from a near monopoly chain of rental emporia to their being sold off for laundromats and convenience stores, through a simple online alternative for choosing DVDs. It had a very erratic path from movie renter to entertainment platform but gradually positioned itself to become the leader in direct online access through its Inventions in streaming technology. It now makes its own TV series. Amazon paralleled it and last year won Academy awards for several of its studio productions.

Meanwhile the cable companies have tried massive M&As and appeals for regulatory protection to make size and oligopoly a substitute for moving with the pace of the Braudel-led ease of access, flexibility, multiple viewing devices and search apps that Amazon, Apple and Netflix offer. Most customers’ expectancies now are that the cable companies will provide the worst service, are overpriced, their plans too complex and inflexible and their responsiveness to customers the lowest of just about all the companies that contribute to their structures of everyday life. Several cable firms have become household names but more as curses than suites. Perhaps they should read Braudel.

The Braudel Rule, plus the diffusion of expectancies from any firm of any size plus the three forces of disturbance constitute a way of thinking about Innovation that we suggest needs to be in the forefront of management awareness. There’s another Amazon, Netflix, Uber, Facebook, eBay, Salesforce.com, Instagram coming to your customers and thus to you – via their understanding and exploiting all the views and the strategies the “plus” factors point to, and that in turn will affect your own company in relation to each and any of them. You need to be anticipative of their dynamics, not reactive to their impacts.
Selected References


Many applications and investigations of the Keen formulation of the Braudel Rule have been the direct work of Professors Christer Carlsson and Pirkko Walden, two of the most noted researchers in the field on mobile services over a sustained more than twenty year period, together with extensive studies by academics who were their doctoral students.

These selected references all use the Braudel Rule as a central framework for the applied work and point to its applicability across geography and sectors.


Tscherning, Heidi, and J. Damsgaard. “Understanding the diffusion and adoption of telecommunication innovations: what we know and what we don’t know.” 2008.

