Diversification in the Era of Convergence

Responding to the opportunities and threats of industry convergence

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Executive summary

Corporations have pursued diversification strategies for decades as a means by which to create long-term value and achieve sustained growth. Historically, companies such as General Electric diversified via inorganic acquisitions[1], in addition to investing heavily in R&D programs. We characterize these traditional diversification investment models as "Acquire" and "Invent":

- "Acquire": Moving into related or unrelated industries by buying minority or majority stakes in already-well-established players
- "Invent": Engaging in R&D programs with long-term horizons for value creation and realization of returns

However, the evolution of the industrial landscape into one of increasing "convergence" and uncertainty has given rise to new, existentially driven investment models for corporate diversification. We characterize the most relevant models in the new "Era of Convergence" as "Scout" and "Harvest".

- "Scout": Gaining exposure to emerging technologies in the pursuit of innovation excellence to "future-proof" the relevance and competitiveness of core offerings in the mid- to long term
- "Harvest": Moving into adjacent business areas by exploiting existing internal capabilities and assets to counter converging industries that threaten to erode and displace core revenues

If corporations do not remain cognizant of these threats and opportunities, they imperil long-term shareholder value. New competitors converging into their sectors will erode their core business and outward-expansion opportunities will not be realized.

Shielding against future existential threats and taking advantage of opportunities require a robust diversification strategy that considers competitive context, acquired capabilities and the acceptance of a degree of exposure to emerging technologies and the trends of industry convergence.

This article provides a novel perspective to analyze investment strategies for revenue diversification relevant to today's dynamic and constantly evolving business landscape. In a subsequent study, we will delve into key strategies and considerations for adaptive portfolio management.

1 For example, General Electric acquired the NBC television network in 1986, an airport security-equipment manufacturer (InVision Technologies) in 2004 and a Canadian aircraft manufacturer (Bombardier) in 2005.

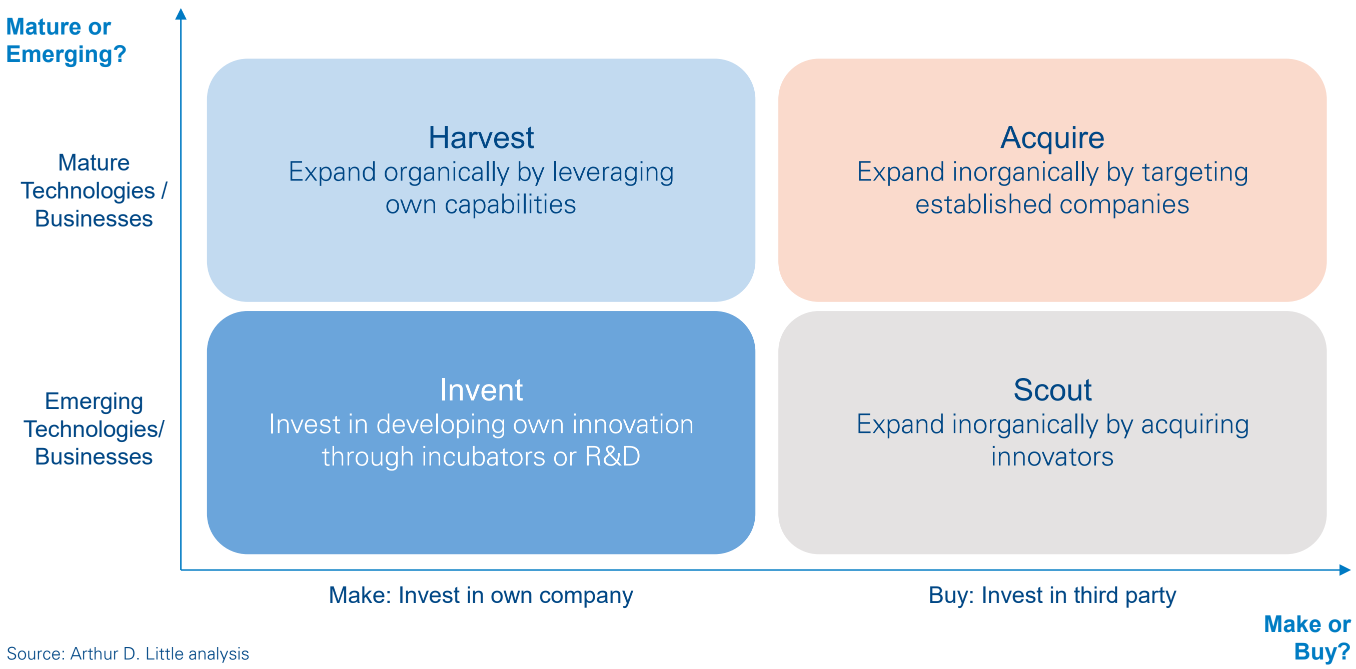
1. Strategic responses in the Era of Convergence

Today, we live in the Era of Convergence, defined by increased cross-sector activities and penetration accelerated by digitalization, for example, between banking and telco players or automotive and tech players. In this new paradigm, the traditional model of diversification through acquisitions alone may no longer be sufficient. Based on extensive casework that involved benchmarking the diversification strategies of over 100 corporations across an array of sectors, we propose a simple, intuitive, yet comprehensive framework when thinking about options for strategic diversification. The framework maps the "mature" or "emerging" nature of targeted businesses against the decision of whether to "make" (from scratch internally through organic expansion) or "buy" (via acquisition to expand inorganically). This demarcates the four distinct investment models: "Harvest", "Acquire", "Scout" and "Invent" (Figure 1).

Traditional investment models were principally focused on "Acquire" and "Invent". However, the Era of Convergence puts much more pressure on corporations to "Harvest" internal capabilities in convergent industries, and to "Scout" and invest in technology start-ups that are developing products or services that threaten to disrupt traditional business models.

If these diversification activities are not pursued, the risk of obsolescence is practically inevitable. A case in point is *Eastman Kodak*, the company that, with its cameras and film, brought the phrase "Kodak moment" into popular use. Eventually, *Kodak* was forced to file for bankruptcy in 2012 due to lack of diversification and "innovation lag", which could have been countered by meaningful "Harvest" and "Scout" diversification models.

Figure 1: Arthur D. Little "Diversification Investment Model" framework



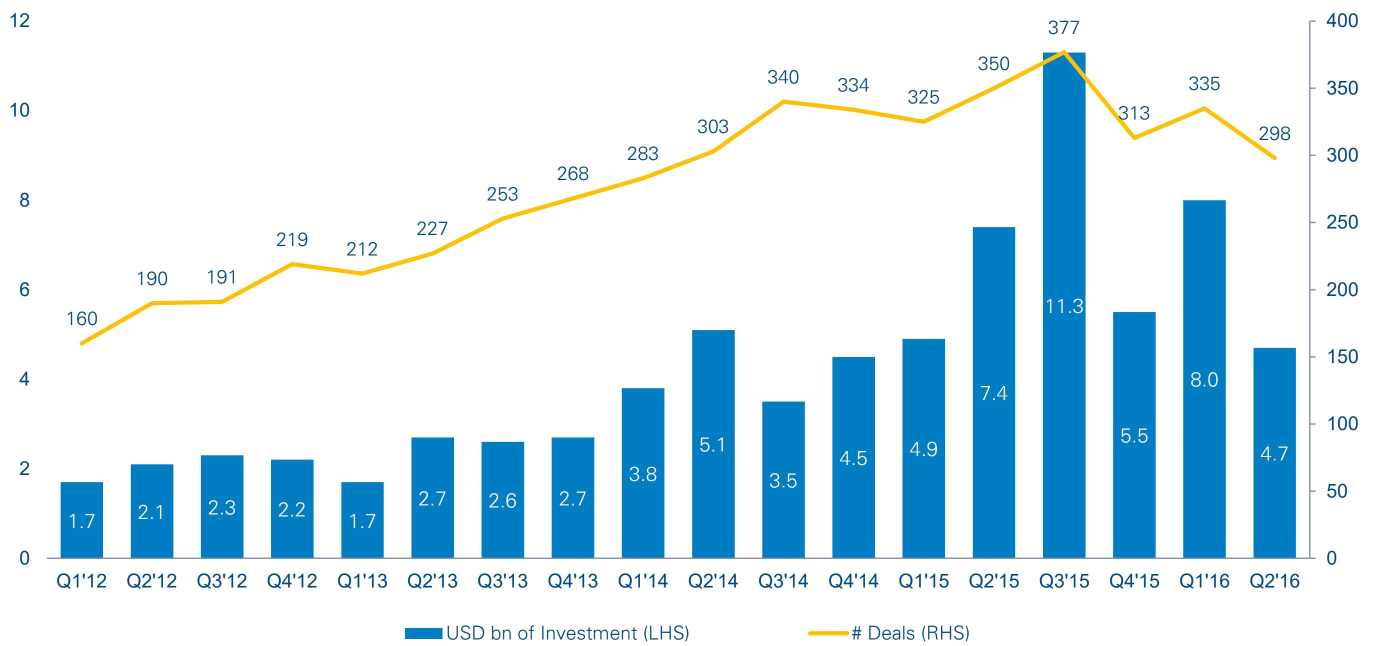
Source: Arthur D. Little analysis

2. The need to "Scout" for and invest in disruptive-technology start-ups

Technology scouting and investing can effectively be pursued through the establishment of a lean and agile corporate venture capital (CVC) unit that has appropriate touch-points with the mother company to ensure the knowledge transfer that will shore up the strategic benefits that the unit can bring[2].

This investment model, driven by the increasing realization of significant disruptive impact from emerging technologies and trends on the core business, has led to a wave of interest in early-stage[3] investing by large corporations.(See Figures 2 and 3 below.) For instance, in the electric utilities space many large players have launched CVC units in the past five years alone to selectively invest in the array of emerging technologies and trends that threaten the traditional utilities business model[4]. Prominent players with the largest, most well-established CVC funds globally include *Intel (Intel Capital), Google (Google Ventures), Qualcomm (Qualcomm Ventures)* and GE *(GE Ventures).*

Figure 2: Global quarterly CVC investment activity[5]



Source: Arthur D. Little analysis

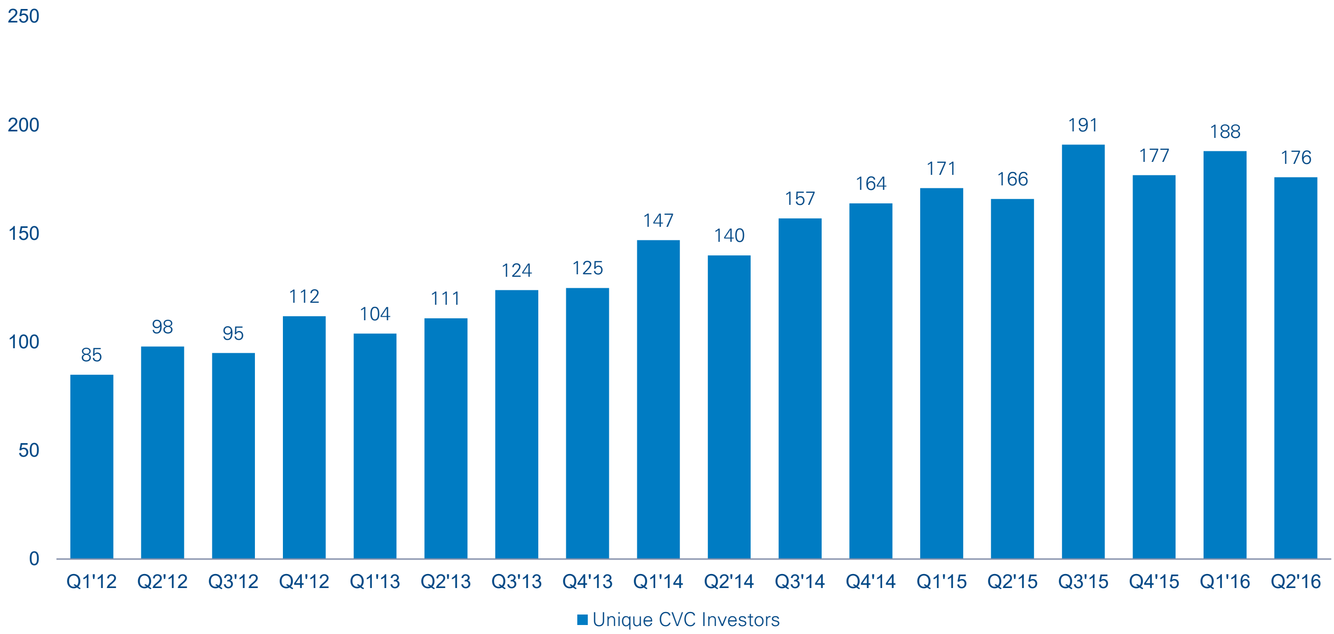
2 This type of investing can also be used as an effective hedging tool for corporates to invest in technologies that could potentially disrupt their core business in an extremely impactful way if they were to come to realization, even if the likelihood of that happening is extremely low. For example, during the 1980s, when integrated-circuit makers were searching for alternatives to silicon (the basis of the dominant chip technology), the silicon-chip specialist Analog Devices created a venture program to invest in competing technologies. Although Analog's portfolio performed poorly (only one of its 13 investees ended up making it to IPO), the CVC program had provided insurance for if the competing technologies were viable enough to disrupt the core silicon-chip business (Source: Harvard Business Review, Josh Lerner "Corporate Venturing", from the October 2013 Issue)

3 We consider Seed to Series B financing rounds to constitute "early-stage" investing. In 2015, CVC units focused over two-thirds of their deals on these stages (2015 CB Insights data)

4 For instance, Engie, EDF, Enel, RWE, E.ON, and ČEZ all launched CVC units to invest in technology start-ups between 2010–2015 (primarily focused on energy storage, renewable energy, energy efficiency and distributed generation)

5 Source: CB Insights

Figure 3: Global number of unique CVC investors[6]



Source: Arthur D. Little analysis

The modus operandi for these CVC units is to seek minority equity-stake participation in early-stage funding rounds in technology start-ups relevant to the core business of the mother company. The benefit of taking equity stakes rather than simply conducting technology scouting is the enhanced "premium" access to technology, in addition to the potentially significant financial up-side that the presence of a large corporate can have on the valuation of a small start-up[7].

A case in point for this investment model is *Engie*, which has facilitated the scaling up of several start-ups in which it has gained an equity stake through its USD 140 m "*Engie New Ventures*" CVC unit established in 2014[8]. One such start-up is *Powerdale*, an electric vehicle-charging start-up, the proprietary technology of which *Engie* is rolling out across Europe through its "*Carplug Initiative*". Another example is *Sigfox*, a start-up that has developed a cost-effective, energy-efficient connectivity network optimized for Internet-of-Things ultra-narrow band communications that *Engie* is piloting in Belgium, with plans for Europe-wide expansion in the mid-term.

This type of innovation-driven entry into the emerging-technology space has the dual benefits of generating an external image of innovativeness, as well as opening up potential early-stage opportunities into which corporations could gain exposure to a sizable financial up-side.

6 Source: CB Insights
7 The presence of a large corporate within a start-up can open up lucrative and highly tractable commercialization programs
8 Source: Engie Press Release

3. The imperative to "Harvest" internal capabilities and assets that already exist

The "Harvest" investment model is based on the premise that the industrial landscape is not an absolute zero-sum game. That is, players from industries that are moving closer to the subject's industry can capture current core business or future expected business by launching products and services that have competitive advantage (usually based on technological superiority or better customer experience). This type of strategic diversification poses the highest opportunity cost to those who are unprepared for the realization of industry convergence. Unforeseen competitors can swoop in with superior products or experiences, or address parts of the market that have been traditionally unserved or underserved.

Such movements into convergent industries are usually based on the monetization of existing capabilities or assets that are put to work in yet-unexploited opportunities.

Selected examples of this type of convergence-competition include:

- Telecoms and banking – One notable example coming from the convergence of the telecoms and banking industries is the creation of the mobile-based money-transfer and micro-financing service "*M-Pesa*" by Vodafone and *Safaricom*. With 18 million customers and more than 80,000 agent outlets[9], *M-Pesa* has altered the landscape of financial services in Kenya, and is expanding rapidly in Tanzania. Since the funds are held by a trust deposited in several commercial banks, *M-Pesa* receives a lighter regulatory treatment than full banks, which allows a more agile business model than those of incumbents, giving it a significant competitive advantage. While such expansions are often pursued as partnerships with incumbents within the converging industry, *Telenor* has taken the next step by establishing a full-scale bank in Serbia through the acquisition of KBC *Banka* in 2013. *Telenor* utilized the banking license and created a web- and mobile-based bank that had 50,000 account openings within the first six months of operation[10].
- Telecoms and utilities – The convergence of telco players and utilities is widespread, and the intensity in terms of mutual reciprocal interference is high. The main activity through which utilities converge on telecoms businesses is by leveraging their pre-existing ducts that connect to households to lay fiber. This fiber is then either used as "dark fiber", in that it can be leased to individuals or other companies that want to establish optical connections among their own locations[11], or for the utility to operate its own telecom services. In the other direction, the main activity undertaken by telecoms through which they converge on the utilities business is to leverage their more "modern" image, pre-existing strong customer relationships and network expertise to offer electricity services to customers[12].
- Automotive and technology – Evolving mobility trends and needs, such as electric vehicles, autonomous driving and car sharing, are being met by new entrants (e.g., Google, Tesla and Uber), which are leveraging their technology foundations to disrupt traditional business models that have reaped billions of dollars in profits over several decades.
- Internet-payment companies and banking – For example, banks are losing out heavily in payment activities by being too slow to react to the increasing need of customers to transact with each other across international borders in a simple and secure manner. An exemplary case in point is the online-payments giant *PayPal*, which captured much of this market opportunity and achieved a USD 46.6 bn valuation at its second IPO in July 2015.

9 Source: Safaricom Annual Report
10 Source: Telenor Press Release
11 An example of this comes from ADWEA (Abu Dhabi Water and Electricity Authority), the public utility in the Emirate of Abu Dhabi in the UAE, which leases its dark fiber network to du, a national telco player
12 For example, Australian telecommunications company Telstra has announced plans to roll out home solar-plus-storage solutions to its consumers

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Figure 4: Key dimensions of the four investment models

Critically important in Era of Convergence

Dimension	Harvest	Acquire	Scout	Invent
1. Sectors to Focus on	Dependent on competencies that will be monetized	Tendency for acquisitions to be within or adjacent to mother company's business	High-technology sectors, focus on convergence and disruptive potential to core business	High-technology sectors within core business area
2. Distance from Core Business	Can vary significantly, depending on the capability/asset that is monetized	Typically within core business area or closely related areas	Broad span from being close to or extremely far from the core business	Within core business area
3. Geographical Focus	Typically local (focus on existing geographies)	Both local and international focus	Global focus on relevant innovation hubs (e.g., Silicon Valley)	Typically local focus (in coordination with global research institutes & universities)
4. Investment Size	Moderate equity or shareholder debt injections, sustained over time	Major acquisitions at infrequent, discrete intervals	Small acquisitions at frequent, discrete intervals	High and sustained R&D spending on a program-by-program basis
5. Investment Stage	Later stage, typically launching a business line in a commercially proven business model	Mature businesses	Early-stage venture capital (Seed to Series B)	Very early, "idea" stage (pre-Seed stage to prototype)
6. Typical Organization	Steered by a centralized investment committee and executed by relevant operational business units	Steered by a centralized investment committee and executed by a centralized M&A unit at the HQ level	Independent CVC investment entity (with substantial autonomy over investment decisions)	Steered by a centralized investment committee and executed by an R&D department
7. Degree of Risk	Relatively low risk; risk is mitigated by existing competency in field of investment	Moderate risk, depends on familiarity of businesses to be acquired	High risk due to uncertainty of emerging technologies	Very high risk that R&D projects will not yield tangible/meaningful benefits
8. FTEs (Effort Required)	High FTEs needed to identify opportunities and manage new businesses launched	Moderate FTEs needed given intensity of due diligence and valuation activities	Low FTEs but with the highly specialized skills needed for venture-capital investments	Moderate FTEs, requires excellent technical expertise and knowledge leadership
9. Time to Realize Returns	Less than 3 years	1–5 years	3–10 years	More than 10 years

Source: Arthur D. Little analysis

4. Key elements of an effective diversification strategy

Our extensive experience across numerous sectors and countries has demonstrated that the development and execution of an effective diversification strategy requires not only resources and capital, but also potentially substantial alterations to corporate governance and the creation of new centers of power outside of the existing organization structure. This may require meaningful devolution of decision-making authority to an empowered investment entity outside of the traditional corporate machinery. These elements are crucial to creating a competent and agile investment entity with the appropriate performance-oriented culture to succeed in new fields of play.

Critical components of a robust diversification strategy include:

- Development of practical and objective investment criteria
- Assessment of current competencies to be monetized
- Restructuring of the organizational and governance set-up to appropriately distribute decision-making power
  - In particular, to devolve authority to an investment unit (or even a separate legal entity) that is incentivized and empowered to drive execution of the diversification strategy

All this needs to be done while managing key stakeholders both within and outside the organization in order to ensure sufficient buy-in to capitalize and drive through implementation of the strategy.

Act or perish

To stay consistently ahead of the curve of industry convergence and technological development, it is no longer sufficient to exclusively focus on the orthodox "Acquire" and "Invent" investment models. As the traditional industry boundaries are blurring in the face of emerging technologies and business models, players from other industries, who are traditionally not seen as competitors, will enter your core business and erode market shares and profits. Thus, a much more explicit focus on the "Harvest" and "Scout" investment models is also needed to ensure long-term survival. Corporations need to think carefully about their long-term diversification paths and take deliberate, meaningful strategic actions to protect against the very real risk of obsolescence. Essentially, identifying options to grow, create long-term value and maintain relevance in a rapidly evolving landscape is imperative. If corrective action is not taken, corporations will lose relevance and either commoditize or succumb, inevitably, to bankruptcy and existential failure.

Arthur D. Little has successfully assisted several organizations across geographies and industries to develop relevant and robust diversification strategies that create sustainable, enhanced shareholder value in the mid- to long term.

Notes

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Headline-Picture

Corporations have pursued diversification strategies for decades as a means by which to create long-term value and achieve sustained growth.

Arthur D. Little

Arthur D. Little has been at the forefront of innovation since 1886. We are an acknowledged thought leader in linking strategy, innovation and transformation in technology-intensive and converging industries. We navigate our clients through changing business ecosystems to uncover new growth opportunities. We enable our clients to build innovation capabilities and transform their organizations.

Our consultants have strong practical industry experience combined with excellent knowledge of key trends and dynamics. Arthur D. Little is present in the most important business centers around the world. We are proud to serve most of the Fortune 1000 companies, in addition to other leading firms and public sector organizations.

For further information, please visit **www.adl.com**.

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