

Finding new growth: the case for innovation by enlargement

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All companies are hunting for the “next big thing” – a major growth opportunity and platform to safeguard future revenues and profits. But simply analyzing megatrends is like a ritual rain dance: much hoopla with a most uncertain outcome. In this article the authors show how companies can embed the hunting capability in their organization and drastically increase the odds of hitting it big.

One question that occupies the minds of most executives is “Where will our future business come from?” Although many have a gut feeling about the right answer, few companies have really good capabilities to identify, assess and exploit major new growth opportunities in a timely fashion. Even rarer are companies that do so in a systematic, recurring way that builds on the collective insights gained from internal and external sources.

When thinking about major new growth opportunities, the framework shown in Table 1 is most useful. It distinguishes between three classes of innovation:

1. **Intensification:** ways to protect and increase a company’s turnover of existing products and services within its existing customer base (“defend and grow the core”)
2. **Enhancement:** ways to broaden a company’s customer base through smart new combinations of existing technologies and markets (“extend the core”)
3. **Enlargement:** ways to enlarge a company’s product and services portfolio or develop new applications (“grow beyond the core”).

Table 1 | The space for innovation-driven growth

New Markets	III. Enlargement		
	II. Enhancement		New Products
	I. Intensification	Modified Products, Enhanced Functions	
New Customers			
Existing Customers	Existing Products	Modified Products, Enhanced Functions	New Products

Source: Arthur D. Little analysis

Hunting for the “next big thing” is a high-risk endeavor. It may take many attempts eventually to hit a rich vein of gold. Yet companies do so because societal trends and technology developments create major new areas of needs and opportunities.

The results from our global 2011 survey on the future of innovation management show that executives expect the proportion of innovation by enhancement and enlargement to double compared to the last decade. In a previous Prism article (Prism issue 1, 2010), we made the case for “innovation by enhancement.” In this article we will make the case for “innovation by enlargement,” as different types of growth opportunities require different approaches and processes. We will show how companies can explore megatrends and emerging technologies in a systematic way in order to identify new growth platforms. We will also show how they can embed these platforms in their organization.

We will focus specifically on what makes the difference between just another megatrend analysis – often performed as a ritual rain dance – and an insightful review of the sources and drivers of new business opportunities.















Where to hunt for the “next big thing”

Hunting for the “next big thing” is a high-risk endeavor. It may take many attempts eventually to hit a rich vein of gold. Yet companies do so because societal trends and technology developments create major new areas of needs and opportunities, for example in carbon management, competitive renewable energy resources or future transportation modes (see Table 2). Companies that respond successfully to these can make a step-change in value creation.

There are also defensive reasons why companies start hunting for the “next big thing.” The best way to avoid having your business disrupted or put out of existence is to be the disruption yourself.

In addition, being considered good at identifying, assessing and exploiting major new growth opportunities can strongly influence a company’s price/earnings multiple. For example, many companies in the chemical industry have successfully repositioned themselves as pharmaceutical, cleantech or food and nutrition players, as exemplified by UCB, Tessenderlo Group, DSM and Bayer, among many others. Last but not least, being seen as a hunter can motivate employees and attract new people, ideas and partners.

Table 2 Examples of major areas of needs and opportunities

 Positive-energy buildings	 Mobile payments	 Zero-emission vehicles	 Cancer treatment
 Organic electronics	 Cloud computing	 Functional food	 Clean water
 Sustainable energy	 Urban mobility	 Personalized medicine	 Digitalization
 Bio-based economy	 Smart home	 Waste energy recovery	 Privacy & security

Source: Arthur D. Little analysis

The key questions are where and how to hunt for new growth opportunities. The most attractive ones are often found by considering how the interplay of megatrends, emerging technology fields and regional end markets could work out. The interplay between these three dimensions can be shown on what we call an “opportunity checkerboard” (see Table 3 for an illustrative example). Before we get into the specifics of how you can use the checkerboard in practice, let’s describe what we mean by these various terms.

Megatrends. The world’s dominant megatrends have the power to transform business portfolios completely and open up possibilities in radically new areas. For example, by surfing on megatrends like resource scarcity, Umicore has repositioned itself from a metals producer to a clean materials technology company. Siemens has recently launched a fourth business sector, infrastructure and cities, in order to improve its position around megatrends such as urbanization and metropolization.

Emerging technology fields. Emerging technology fields are the equivalent of megatrends as far as technology is concerned. They have the potential to disrupt entire business ecosystems and create major new business opportunities. For example, advances in machine-to-machine communications technologies allow manufacturers of industrial equipment to offer a myriad of connectivity-related services, such as remote maintenance and diagnostics.

Regional end markets. The impact of megatrends and emerging technology fields on various end markets in any specific region depends on the particular dynamics of that region, as shaped by local regulations, its demographics and its economic development status. For example, the high-rise buildings boom linked to the urbanization megatrend in China has been accompanied by some major fire calamities, prompting a tightening of fire safety regulation, which in turn presents specific local opportunities for manufacturers of fire-retardant insulation materials. Home water filtration units, sanitary disposal systems and one-button, easy-to-handle medical systems are examples of frugal innovation addressing customer needs in emerging markets.

Checkerboard. The checkerboard points to distinct opportunity spaces, i.e. potential new growth areas at the intersection between megatrends or emerging technology fields on the one hand and end markets on the other. For example, the intersection of the megatrend “new energy systems” and the end market “chemicals” could be marked as an opportunity space: one can sense that intensive research activity is currently going on at many chemical science departments of universities and R&D centers of chemical companies in the field of new energy systems. Each opportunity space in turn contains a set of emerging business topics. Fuel cells, solid state batteries and phase-change materials are examples of such topics in the “new energy systems – chemicals” opportunity space. Finally, a company can select and develop some of the business topics depending on their fit with its current strategy and capabilities, either globally or by region.

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Table 3 Example of an opportunity checkerboard

		Global end markets														
		EU			Asia			US			ROW					
		Agriculture	Mining	Oil & Gas	Basic materials	Chemicals	Nutrition	Consumer goods	Energy & Utilities	Health Care	Industrials	ICT	Transportation	Consumer services	Financials	Defense & Security
Megatrends	New energy systems					★										
	Food availability															
	Multi-polar world			★												
	Growing & Ageing population							★								
	Urbanization & Metropolization												★			
	Health awareness															
	Rising middle class															
Emerging technology fields	Digital & Direct											★				
	Energy recovery												★			
	Soil remediation					★										
	Flextronics							★								
	Machine-to-Machine															
	Smart transport systems												★			
	Performance IT systems															
	Bio-based materials															
	E-health															
	Nutraceuticals							★								
Targeted drug delivery																

Source: Arthur D. Little analysis

How to hunt for the next big thing

An effective approach for identifying, assessing and exploiting emerging business opportunities consists of four steps:

1. Design the checkerboard.
2. Select the most promising opportunity spaces.
3. Scout for tangible opportunities in the most promising spaces.
4. Make the business case for market entry.

Step 1: Design the checkerboard

The checkerboard approach takes a fresh look at the interplay between three dimensions: megatrends, emerging technology fields and end markets. By creatively bouncing these three against each other, you can discover opportunity spaces.

A checkerboard is an effective tool only when it is bespoke. On the one hand, you want to avoid wasting time on irrelevant parts of the universe. On the other, you want to ensure that you don't miss out on anything major. Therefore it is important to set and define the dimensions of the checkerboard clearly by answering questions such as:

- Which megatrends are truly relevant for our business in the next 10 to 15 years, and how can we address the underlying unmet customer needs?
- To which emerging technology fields could we gain access, and how would we best make use of them to develop end market innovations?
- Do we cover the entire world or a selected set of regions?
- Where do we want to focus our efforts eventually?

Answering these questions is an iterative, creative and collaborative process. It takes data-driven analyses and industry expert insights to assess the impact of megatrends and emerging technology fields on the value chain of selected end markets. The quality of these inputs will determine the accuracy and the innovativeness of the output.

Step 2: Select the most promising opportunity spaces

Once you have designed the checkerboard and identified hotspots, you can draw attractive opportunity spaces on the checkerboard. An opportunity space contains a coherent cluster of emerging business topics. An opportunity space should be sizeable, not be covered by current businesses, and constitute a radical or adjacent innovation for your company.

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The selection of the most promising opportunity spaces is based on the assessment of the intrinsic attractiveness of the associated markets and your company's ability to execute the strategy required to realize the opportunities. The purpose of the assessment and the ranking of the opportunity spaces is to focus future efforts on the most attractive ones while leveraging the company's unique market position and capabilities.

Step 3: Scout for tangible opportunities in the most promising spaces

Once you have selected the most promising opportunity spaces, you can go out and identify specific business opportunities for your company. Small, multi-disciplinary scouting teams are effective in deep-diving into an opportunity space. Structured idea management is used to translate concrete business ideas into tangible business opportunity concepts. Each of the concepts needs careful evaluation in terms of business potential and strategic fit with the current business, organization and capabilities. It includes an analysis of customer benefits, business potential, competitive advantage, effort and risk. This is no easy exercise, as opportunities in formerly unexplored areas are by definition difficult to evaluate.

Step 4: Make the business case for market entry

Once you have identified, evaluated and ranked tangible opportunities across the various spaces, you can make a detailed business case for the most promising ones. In addition to financial projections, the case should contain a go-to-market plan detailing the unique selling proposition, the business model, the target segments and related points. You should also elaborate a realistic action plan to develop and embed the new growth platforms into your organization, thereby considering potential partnerships and internal resource requirements.

The insert provides an example of how a company active in life and materials sciences used the above approach to create significant business value.

Exploiting emerging business opportunities in a life and materials sciences company

A global life and materials sciences company was eager to identify new business areas that had the economic potential to become a future business unit or division, with the promise to generate significant new revenue streams and strengthen the company's position as a leading innovative player. To that purpose, the group launched a "checkerboard" initiative. In parallel, it sought to anchor capabilities (i.e. methodologies and tools) for innovation by enlargement into its organization.

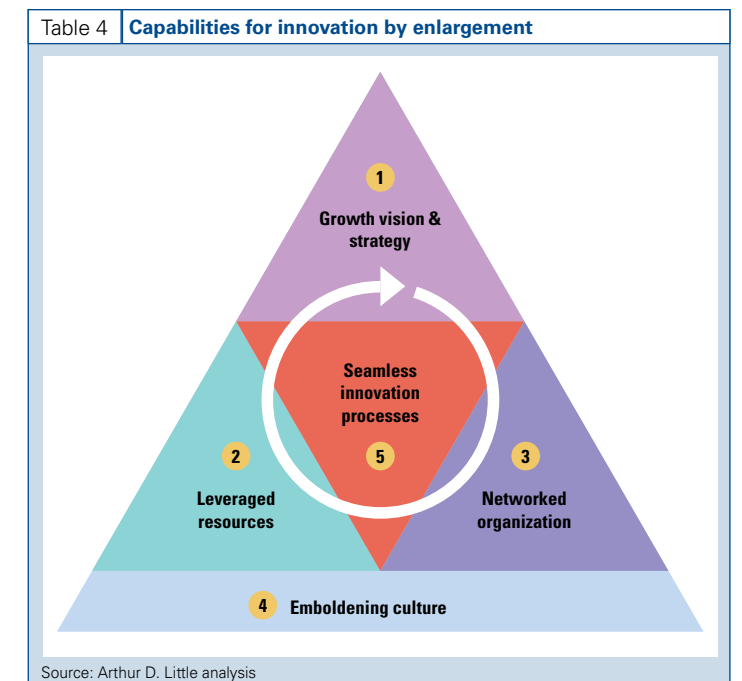
The company used a systematic process to investigate around two dozen end markets, megatrends and emerging technology fields. It reviewed megatrends for their ability to drive change in the selected industry verticals and end markets. It explored unmet customer needs, new business models and emerging technologies as enablers for new business. This led to the identification of the biggest innovation challenges on the "checkerboard." The company paid particular attention to developments in emerging markets. Innovation challenges are abundant in markets that represent a combined potential customer base of about 5 billion people and global spending levels of a middle class that will rise towards \$20 trillion in the next decade.

The company identified 10 potential opportunity spaces that served as starting points for a deep-dive scouting process in the markets in order to confirm their commercial potential and fit with the company's capabilities. The combination of valuable market intelligence and deep insights from industry experts allowed a rigorous analysis of a portfolio of more than 30 emerging business opportunities. The business cases for these opportunities represented a combined future business potential of several billion euros.

After careful evaluation, the company selected a handful of the most promising emerging business opportunities. They have now been anchored as growth platforms in the innovation organization in order to prepare successful market entry in a number of years' time.

How to embed the hunting capability?

Hunting for the "next big thing" or more generally the capability to "innovate by enlargement" must be embedded in the organization. These capabilities fall in five areas (see Table 4):



Growth vision and strategy. Successful innovation by enlargement starts with a clear growth vision and strategy:

- A clear and shared vision and strategy for enlargement as a source of growth, communicated by top management, for example through innovation roadmaps
- Challenging the business units to identify breakthrough changes (either disruptive or reinforcing) and new business models for balanced growth
- An internal and external positioning as a highly innovative player.

Leveraged resources. Innovation by enlargement requires the presence of dedicated resources and enabling tools, such as:

- Entrepreneurs and intrapreneurs, time, facilities and investment funds
- First-class innovation partners, e.g. visionaries, technology partners and research institutes
- Online and physical forums for knowledge sharing and building
- Business intelligence and analysis, e.g. on megatrends, unmet customer needs and potentially disruptive industry developments
- Support in the area of intellectual property rights.

Networked organization. Innovation by enlargement requires organizational instruments that enable coalitions across internal boundaries, such as:

- Organizational units for breakthrough idea incubation and new business venturing
- Innovation teams and coaches.

Emboldening culture. Innovation by enlargement flourishes when the company culture encourages boldness, for example as the result of:

- Managers able to lead enlargement
- Tolerance for uncertainty and failure
- Recognition and resources for breakthrough innovations.

Seamless innovation processes. Innovation by enlargement doesn't happen by itself. It needs:

- Specific processes for idea management, incubation and growth

- Continuous gathering and analysis of business intelligence aimed at radically new business areas
- Relevant key performance indicators for radical innovation.

Some of the leading innovators around the world who do a good job in this area use different vehicles to manage their enlargement capabilities. For example, Google uses Google Ventures to find the most interesting entrepreneurs from a range of sectors and stages, and then uses all of its resources to help them succeed in diverse areas including mobile internet, smart grids and life sciences. Samsung uses a similar vehicle called Samsung Venture Investment. BMW uses innovation councils in fields such as energy management and lightweight, driving experience, driver's environment, safety and security, and value and appeal. Shell has its GameChanger initiative to offer funding support for breakthrough low-carbon energy technologies.

Examples such as these and our experience in building lasting growth capabilities point to eight key factors of success:

Some of the leading innovators around the world who do a good job in this area use different vehicles to manage their enlargement capabilities.

- Apply a systematic and analytic approach, but also leave enough room for creativity and entrepreneurship
- Use a value-driven approach to innovation, i.e. think in terms of functionalities to link technology solutions to market challenges and (unmet) customer needs
- Connect to the outside world as well as to your company's internal organisation when it comes to strategy, innovation and marketing
- Use high-quality expert inputs, including from local experts who can provide a regional perspective
- Be creative when grouping and labeling opportunity spaces in an iterative process
- Visualize the new growth opportunities and make business cases for them

- Select the business opportunities where the company's expertise and competencies can really make a difference, i.e. play to win
- Use a participative approach to embed the "checkerboarding" process in the organisation and make it replicable.

Insights for the Executive

Most executives consider that answering the question, in a timely fashion, of where their company's future business will come from is still as much an art as it is a science. We would agree with that view, but at the same time we know that it is possible to drastically increase the probability of finding the "next big thing" on time. Major new growth opportunities materialize when megatrends and emerging technologies coincide with shifting need patterns in certain regions and industry value chains. By using opportunity checkerboards, companies can identify new growth platforms systematically and embed these in their organization.

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