COOPERATE TO INNOVATE

# new frameworks for growth

## ECOSYSTEM DRIVEN INNOVATION

***A guideline for building and expanding a new market***

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# Ackowledgements

Our thanks go to our clients and partners in this research and the many external experts who contributed with their best thinking to the development of this new framework for growth.

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# 1 Ecosystem Driven Innovation

*"Integrating frameworks for innovating through ecosystems is key"*

Wim Elfrink, Cisco

# Introduction

As the world becomes more complex, we observe an upcoming power of ecosystems as key driver for growth.

Until today we have typically seen three types of ecosystems. The first one is a network of suppliers that evolved to an ecosystem. These ecosystems are centrally but dynamically managed by the focal company. Apple knocked out Nokia with this ecosystem model. We are also seeing ecosystems as interdisciplinary virtual, so called *mass collaborations*, evolving between Government, Private Industry, Science (and sometimes consumers). Take for instance FutureCityLab in Berlin. Then a third type is typically the physical concentration of innovative institutions in one region. Take Brainport in Eindhoven or Silicon Valley in the US.

The first model is evolved around execution, the second is primarily focused on generating ideas or solutions, and the third aims to combine both in order to form a small economy.

*Because of the economic pressure, we are starting to see a growing need to accelerate the evolvement of lean and highly functional ecosystems who can do both with more speed: generating innovative solutions and successfully executing them.*

Deutsche Telekom is developing a lean ecosystem model by setting a billion dollar growth target in order to develop a whole new market. Living PlanIT aims to become one of the fastest growing technology firms with their ecosystem driven Urban Operating System. Cisco recently evolved into a more horizontal "*open for collaboration*" business model and hereby is preparing the way for an effective ecosystem driven approach.

As the market is still in transition, no definite answers can be given on what the outcomes of these new approaches are. This little book therefore offers a first guideline on the steps to take when executing an ecosystem driven innovation strategy. In collaboration with a number of innovative companies, we have at first explored their preliminary struggles and findings in this area, and used them to define 7 Key Success Factors.

Secondly, we observed that each of our partners in this research, approached problems from a different angle, facing different challenges and therefore requiring different models.

Essentially we identified 4 key problems requiring 4 key approaches. We used them to develop a logical framework that can be used to successfully pursue an ecosystem driven innovation strategy.

We will be using this thinking as the basis for the development of our platform technology and business model services. Our aim is to help our clients become digital service platforms themselves, enabled by flexible and scalable ecosystems.

We hope it will inspire you to move and act.

December 2011

*"As we keep on hearing for several years: "Next year the market will take off", we have decided to drive the market ourselves."*

Markus Breitbach, Deutsche Telekom

# Executive Summary

Most organizations know the future of innovation is not top down and centrally managed, but bottom up and more decentralized. The world has simply become to complex and dynamic to control autonomously.

To align with locals needs, manage complexity, spread risk and accelerate time to market, companies are actively creating, or participating in ecosystems. So far, many companies lack an organizational framework for ecosystem driven innovation. As a consequence they are confronted with barriers on all cooperation levels – internally, within the ecosystem and externally. This again might lead to inefficiency and lack of speed.

In order to derive the critical success factors and deliver a framework for growth, this report is written in cooperation with several ecosystems. The result is a 4 Pillar Framework.

The essence of the 4 Key Pillar Framework is that, in order to survive, companies, or a part of them, should become horizontally structured and operate as a platform that links and facilitates functional, local and highly focused ecosystems, that can rapidly innovate and execute.

Pillar 1 briefly describes that companies should build ecosystems, by restructuring and expanding their partnerships into functional problem solving units along strategic areas, segments and solutions types.

Pillar 2 describes how these ecosystems should be actively developed into effective executing autonomous entities.

Pillar 3 demonstrates how to connect the ecosystems to a platform that operates as virtual market.

Pillar 4 explains how to expand your market by organizing collaboration between the ecosystems around new market needs and develop new sub ecosystems around them.

*“Ecosystems don’t die, organisms do.”*

HOOPOEH

# Why ecosystem driven innovation?

As financial growth in Europe and US stays out, companies are searching for new ways to create demand themselves. Some technology companies start to make smart use of ecosystems as basis for growth.

Many CEO's are in the West are confronted with the following market characteristics:

- **Growth stays out.** Old strategies fail. Top down initiatives take too much time. Innovation efforts are scattered and not executable or scalable and demand simply diminishes.
- **Commoditization danger.** Rapid technology cycles and, via the ever lowering technology barriers, the growing number of disruptive start-ups endanger current solutions to be commoditized.
- **Projections difficult.** With current economic volatility and continuous new technologies, it is increasingly difficult to make sound projections based on meaningful business cases.
- **Markets fragmented.** Countries and area's are still more silos then scalable markets. This because regulation, technologies and protocols still differ substantially. It is not fully clear how this will develop.
- **More risk**. As debts increase and at the same time political and environmental turbulence proceed, the risks that coincide with investing in substantial innovations also grow.

Nevertheless, some companies remained ambitious and increased sales targets.

Some companies are responding with bold initiatives and aim to drive the market based on an open and bottom-up approach that we shall call ecosystem driven innovation…

*"Our competitors aren't taking our market share with devices; they are taking our market share with an entire ecosystem."*

Stephen Elop, Nokia

# What is ecosystem driven innovation?

## ECOSYSTEMS

To explain our definition from ecosystem driven innovation, we will first explain what we mean with an ecosystem. The term ecosystems originates in the science of nature, where an ecosystem is

- An ecological community
- together with its environment
- that operates as a functional unit, and
- typically does not have fixed borders,
- but overlaps dynamically with other ecosystems.

In this biological sense, an ecosystem can be a bunch of trees on a mountain. But the mountain with the trees on it is again another ecosystem. An ecosystem therefore is a stretchable phenomenon.

In this paper we will analyze ecosystems as a basis for innovation between companies and their customers. We will define ecosystems as:

- The minimum number
- of functionally interdependent companies
- that is required and jointly capable
- to offer a total solution

If Philips Lighting aims to develop an Intelligent Outdoor Lighting solution for the City of Eindhoven, the relevant involved ecosystem would consist of an Energy Supplier, a Software Supplier, an Installer, a Grid Operator and potentially a Telco.
When the complexity of the end product increases, so does the number of involved parties in the ecosystem.

Currently 'ecosystem' is being used as a business term widely across industries to indicate all kind of partnerships and interrelated parties with varying complexity.

**Microsoft early adaptor of ecosystem thinking**

Microsoft was one of the first to formally adopt the term ecosystem to indicate its community of software and hardware partners that operate on Windows. In 2010 IDC conducted a study to evaluate the impact of this ecosystem. For every dollar Microsoft generated in 2009, their ecosystem made 8.7. Because of its clear value and economic impact, Microsoft has developed a diverse set of tools and resources that enforces the symbiosis between Microsoft and its partners.

In this study we propose an evolution in the definition of what an ecosystem is: it is not only a set of inter related companies that each functions as a supplier of a sub component (as is the case for Microsoft or Apple) but an ecosystem in our term requires the extra capability to quickly develop execute solutions. This means an ecosystem operates as an autonomous thinking entity that is capable for executing innovations on decentralized level. In the case of Microsoft or Apple it is the corporate that develops top down innovations and executes and adapts them in cooperation with their ecosystem

Key observation we have made is that typically ecosystems are not being defined as a minimum number of companies that work together as a highly functional team, but as a conglomerate of institutions grouped under a common theme or market. Samsung and Apple step by step tied their big number of suppliers closer to their companies and managed them so that they would operate as one big ecosystem.
When Stephan Elop, CEO of Nokia, this year sent a note to his company saying that Nokia was hit, not by devices, but by entire ecosystems, he referred to this kind of ecosystem definition. For these companies however, their ecosystem was primarily part of their execution strategy, not their innovation strategy.

When aiming to use ecosystems as a source of innovation, their size and structure becomes key, because this determines their ability to collaborate and execute.

## ECOSYSTEM DRIVEN INNOVATION

To maximize the chance on success, we maximize efforts or participants. This is how the idea of mass collaboration emerged. The problem with these tools is that it drives a big gap between idea generation and execution. For some companies with very simple products this is no problem, but in more complex environments it is.

When an organization aims to innovate based on collaboration, we propose them to realize execution speed by building up their total ecosystem with lean functional ecosystems. In order to meet the requirement of limited dependency on the one side and maximizing the innovation potential on the other side, we propose to build in some redundancy buy creating extra shells or layers around each sub ecosystem.

Ecosystem driven innovation can be defined as the way companies frame a growth strategy by using one, ore a multiple set of ecosystems, to create new solutions or even new demand.

*"The future of work is this: ecosystems exchanging the key resource - human talent"*

Steve Sichtman, Blue Carpet

# 2 The 7 Key Success Factors

*"Corporates became big by saying no, so ecosystems become a multiple of 'no-sayers'... We really need new perspectives on growth."*

Cees Bijl, Philips

# The 7 Key Success Factors

## DRIVERS OF INNOVATION

Based on the interviews, there are 7 Key Success Factors for innovation through ecosystems. To abstract the success factors we take 3 levels of analysis which we call 'drivers of innovation'. On each level we look at the existing enablers and barriers for ecosystem driven innovation.

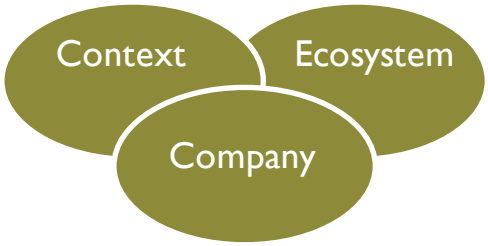
- Context: Each ecosystem is part of a broader context. This context is primarily defined by the economic climate and the regulatory characteristics as driven by Governments. We will look at how Governments can help driving innovation and how ecosystems can successfully interact with Governments.
- Ecosystem: An ecosystem consists of several companies and or institutions. We look how specific tools, structures and models can positively or negatively influence the collaboration between and within ecosystems.
- Company: Each individual company can influence the collaboration by its strategy, culture and commercial approach. We describe which characteristics help and which don't.

With these learnings we propose a new framework for growth, based on ecosystem driven innovation.

## THE SEVEN KEY SUCCESS FACTORS

The seven key success factors we found to drive innovation through an ecosystem are: Each ecosystem is lean and functionally structured; The presence of a bold, concrete and meaningful vision that transcends the vision of the individual companies in the system; a business model that incentivizes and helps to manage the companies to work together on long term basis and is able to capture value from several angles; A virtual or physical working place in which the ecosystem partners on daily basis can freely and transparently communicate and share information on planning, resources and budgets; A "middle man" that binds, guides and accelerates the innovation efforts; An open, learning and entrepreneurial business culture; Smart interactions with Governments based on ecosystem thinking.

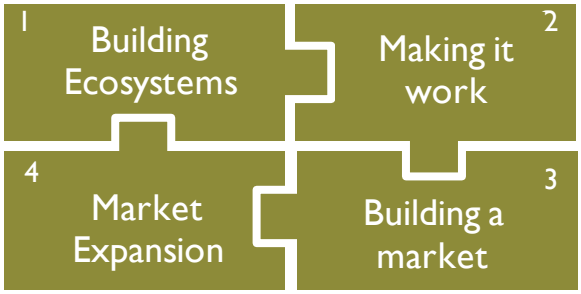
## DRIVERS OF INNOVATION




## KEY SUCCESS FACTORS

| | Barriers | Enablers |
|---|---|---|
| Context | Interactive KSF's | |
| Ecosystem | Collaborative KSF's | |
| Company | Business KSF's | |

## 4 KEY PILLARS FOR GROWTH



# Context: barriers, enablers, KSF's

## BARRIERS ON CONTEXT LEVEL

- **Mental and physical silos.** Our economic context has been organized up until today in specialized silo's and separated networks. Concisely illustrated by Wim Elfrink, Global SVP at Cisco: *"Even the very building in which we are currently discussing, might already contain 8 separated networks and 84 protocols…"*. This means there is both a physical barrier and a mental barrier present in the market. Moving back from specialized thinking again to holistic thinking is an intellectual and financial strain for most companies.

- **Climate of distrust.** Unfortunately, tender systems have led to many perverse market effects where companies, after feeling they had been financially squeezed out in the tender, subsequently overcharged on any additional or unexpected activity during the project. This brought economic interactions today to a basis of distrust, exactly when we, more then ever, need an encouraging, trustful and open economic climate as basis for new growth

- **Controlling Governments.** Governments that try to manage innovations or directly invest and control innovative initiatives are expected to fail in an ecosystem driven environment. The least appreciated control tool and innovation killer of Governments is the Tender System.

- **Potential eco-fatigue.** Silicon Valley, the most innovative and commercially successful region in the world since 1954, regards 'Clean Tech' to be the new and biggest growth driver of the near economic future. Clean Tech would be the big driver behind many sustainable or "smart" solutions. Although this market is still nascent and thus opening up, we observe a negative dynamic pulling a brake on growth: On the one hand there is a massive global campaign for sustainable energy efficient solutions. On the other hand there is simultaneously a strong economic downturn. The net result of consumers being bombed with information on sustainability but experiencing limited financial ability to invest, may be a general indifference towards it. Bob Post, CFO of Dura Vermeer, a Dutch Construction Company, observes a certain "*eco-fatigue*" among his end users.

## ENABLERS ON CONTEXT LEVEL

### Ecosystem thinking

- **Multi-user.** The Government is not one physical person, but an ecosystem in itself. This means the decision, budget and need are also not unified in one person, but are embodied in variety of entities and persons. Any successful interaction with a Government should therefore encapsulate a multi-user business case. This also helps to drive out silo-thinking and will lead to better end user aligned solutions. Such case should contain the following characteristics:
  - Multi-perspective. This means each company in the ecosystem must understand and include the business case of the other companies involved. If the offered solution does not generate profit for all companies, joint efforts are useless.
  - Multiple benefits: Clear quantified social (i.e safety), economical (i.e. jobs or costs) and environmental ($CO_2$ reduction) benefits. Almere Smart Society works with a comprehensive multi-perspective model.
  - Explicit formulation of the difference between the current situation and the new one. This sounds obvious, but many companies underestimate the low willingness for change, and only dream away on what they think they can improve, without seeing what the exact merits of the current situation are. Simply because most of them do not exactly know.
  - Clear understanding of the willingness to pay for the delivered benefits. Sometimes companies overprice their solution as a result of not addressing the two above characteristics. It happened to the Heijmans-Philips Dynamic Road Marking proposition. Technically excellent, but tendered out.

- **Holistic and solution driven approach.** The Government by nature always balances between the urgent and the important, between the short term and the long term, between the rules and the incident. This highly dynamic characteristic is also an important reason why companies need each others complementary capabilities in an ecosystem. It requires not only ambidextrous qualities (balancing short term and long term), but also the ability to 'zoom in' and 'zoom out' to be able balance the concrete and the abstract. In more daily terms: an holistic view is required combined with an advanced solution solving approach. The most simple short term solution for individual companies in the ecosystem is to have both trained Strategy Professionals as a knowledgeable Product or Research Manager involved.

## Government as orchestrator for innovation

- **Bring parties together.** Governments need to learn not to control ecosystems, but just to bring relevant parties together. Amsterdam Innovation Motor (AIM) is a good example of a local Government that enacts like an orchestrator instead of a controller. Amsterdam, recently named in an Australian index to be one of the most (nr. 6) innovative cities in the world, has appointed AIM as a separate entity (NGO) to catalyze innovation. To realize an energy transition towards more sustainable solutions, AIM developed a platform with 70 partners. This resulted in 16 projects, with significant international spin off. We will elaborate later further on this example.

- **Facilitate instead of invest.** The Government should place the commercial challenge and responsibility in the ecosystem itself, and not go beyond this role (I.e. Acting as an Incubator or Investor). The solutions offered by the ecosystem should be based on a very attractive business case for external investors to step in. Governments can form a PPP, but the Government equity should stay very low and the question then is, if tender systems are required. This way the Government is more of a facilitator instead of the client. The Government of Portugal works this way in the case of PlanIT Valley, a private initiative to build a Smart City in Paredes, Portugal, based on an ecosystem approach.

- **Install tender funds**. Tenders are often an innovation barrier for companies. Forming an ecosystem can increase the chance to win a tender, because the involved parties have an intellectual head start over competitors and can exercise influence on the tender specs. Nevertheless, not all companies have equally deep pockets. A solution could be that Governments install (enlarge) tender funds that guarantee some compensation. This way the participated companies are stimulated to make serious innovation efforts. The general complaint of, especially construction companies is, that these funds, if they exist, are far to small to compensate for even a minor portion of the actual investments that are often necessary.

- **Drive for perfection.** Asian countries have, in comparison with Western Countries, a strong drive for perfection and thus the willingness to invest in the best and most innovative solutions. This stimulates companies to work together in ecosystems in order complement each others capabilities to achieve the best.

**Leanings on contextual level**

- After decades of specialization, the market needs to move from a perspective where the interest and value of single dimensional customers, companies and governments are central to a multi-dimensional perspective where ecosystems become central.
- Key about ecosystems, is that they can not only be a set of interrelated suppliers or networks, but really virtual ventures who create new solutions together.
- For companies to interact with Governments this primarily means building in more perspectives in their approach. Ecosystem partners can complement each other in this.
- Governments should not fully step back nor fully control markets, but learn to help companies successfully organize in ecosystems and orchestrate their innovation.

KSF ON CONTEXTUAL LEVEL

| Traditional | Ecosystem driven |
|---|---|
| 1a. Use single user business case | 1a. Use multi-user business case |
| 1b. Focused sales driven approach | 1b. Holistic solution driven approach |
| 1c. Government = Investor | 1c. Government = Orchestrator |

# Ecosystem: barriers, enablers and KSF's

## BARRIERS ON ECOSYSTEM LEVEL

- **Inefficient ecosystem structure**. Initiatives were ecosystems are required, frequently start with a very open scope. It is around something new and the ecosystem requires committed partners. But easily, the minimum required number of companies to solve the problem is exceeded. This negatively influences the start-up and processing time. We have already explained that key to success is to build lean, functional interdependent ecosystems.

- **Shift from Project to Problem.** There are typically three type of clients in the current low economy: 1. Clients who simply postpone (certain) investments; 2. Clients that cut down their budgets and simultaneously (selectively) downsize their ambitions; 3. Clients that cut down on their budgets but hold on to their ambitions and therefore confront the market with a challenge: "Become creative and solve our problem against lower investments." To offer an efficient and smart solution, companies must cooperate in ecosystems and go first through a more abstract consultative phase, before a concrete project can be defined. Currently, some ecosystem driven innovations tend to derail, because they face difficulties in holding focus and defining the right innovation metrics.

- **No problem, no sense of urgency.** As it happens in the field of innovations, the client does not even formulate a concrete problem, but is just interested to see what exciting new things technology can do for them. The ecosystem might fall in the trap to start working out vision documents that are characterized by lacking all sorts of concreteness. A basic rule to drive change, is to understand what will not change (on short term) and why. So why is the situation as it is and how comfortable currently are the end users? Reggefiber, a Dutch supplier of fibre networks, and the whole ecosystem around it, would not have existed if Almere City would not have bumped into the problem of separated and slow ICT networks. Without a problem, there is no sense of urgency, and without a sense of urgency, there is little willingness to pay (at least in the West)

- **Slow decision making.** Often ecosystems tend to use old approaches for new problems. They run their periodical meetings, define agenda's and actions and subsequently communicate outcomes and next steps. Just as participants are used to inside their own companies. This old attitude towards innovation, results in several barriers to sound cooperation:
  - **'No-culture.'** As Cees Bijl, VP at Philips Lighting, observes: "*Multinationals have become big because they learned to say 'no*"'. I.e. To avoid risk and because they have learned to differentiate between what are their key strengths and what are not. Each of the companies involved in the ecosystem should realize they need to give the initiative enough time and space to make it flourish, and manage their cultural inclination to say no in a stage too early when operating via ecosystems.
  - **Limited commercial purpose**. Innovation is a risky business. To solve this, companies tend to collaborate in limited risk environments that only have a learning, demonstration or corporate social responsibility (CSR) purpose. This directly places the initiative of the management agenda and potentially cripples the mind of the 'target driven' participants.
  - **Decision making tool is lacking.** As long as the ecosystem makes use of traditional communication tools and decides based on limited information shared in meetings, it is difficult to make effective progress. Tactic or strategic discussions can not run freely via chat programs, and, in a later stage, operational information on such as internal development time schedules and budgets are not shared between the companies. That is why AIM in collaboration with MIT and Accenture, is working on the development of such a tool. The future of innovation depends on the willingness of individual companies to be 'open'. The first step in this area is decision making tools, but the next step is that the ecosystems form individual temporal organizations.

- **'Owning the client mentality'.** Companies, especially bigger ones, are inclined to lead and own clients. As some have put it: *In our initiative we experience that an 'owning the client mentality' is lethal for the team spirit.* In several instances it is not directly clear who is or will be the paying client or decision maker. This places an extra challenge on organizations who are used to execute a focused sales and account management.

## ENABLERS ON ECOSYSTEM LEVEL

- **Clear vision.** Corporates are learning not to build big billion dollar visions for existing or emergent markets via the lesson of 'the tyranny of the big numbers', well articulated by thinkers like Harvard Business School Professor Clayton Christensen and recently by Peter Sims with his book 'Little Bets'. As a consequence companies try to initiate innovations more bottom up in order to simply see and learn as quickly as possible from their experiment, instead of focusing on a big market that is already dominated by someone else. This thinking in itself is very good, but encapsulate several dangers when they are not part of an overarching vision. First, bottom up initiatives are inclined to become scattered and out of sight of the Management Team. Second, when companies innovate bottom up by participating in ecosystems, they are part of a team that easily looses energy and focus when they are not backed up in an overarching clear vision on why they are doing it. An example of an ecosystem driven company with an inspiring vision is Living PlanIT, a Swiss based Urban Technology Firm, recently selected by the World Economic forum to be one of the leading Technology Pioneers of the year. Their vision is very concrete: Build our own smart City! As a result, the company has been able to attract a wide variety of professional ecosystem partners. Secondly the vision was a big driver for the company to attract highly committed professionals, who were even willing to trade their salary for equity. This in itself is a unique phenomenon in the industry.

- **Sustainable business model.** A second very important enabler for successful innovations is a solid underlying business model. Without this, initiatives remain at best local. When companies try innovating through ecosystems there are challenges on two levels.
  - **Binding factor.** First, on ecosystem level, especially when bigger companies are involved, there is the challenge how to bind the companies together and incentivize sustainable cooperation in which the ecosystem is able to repeat her success. This is relevant when there is no focal firm that builds a solution and for that purposes has created its own ecosystem, but when more or less equal partners are invited or urged to work together. This last situation is a new field in which few companies have a proven method and start with something that is often regarded as an experiment. In this case, it is too early to directly work with equity. Next to that, equity shares in ecosystem driven innovation might also lead to adverse effects.

A Dutch serial entrepreneur part of our venturing program in the field of eye care, simply explained it like this: *"At the end of the day, just before closing time, I might approach one of our top surgeons in the clinic and ask him if he is willing to operate a last minute patient. In the situation of him being an equity partner he will think: "I won't do it. I have to catch up my daughter and I do not want to let her waiting for just 75 euro extra." In the situation I incentivize him differently he will think: "Let's go for it. For 400 euro I can buy my daughter something nice to make it up.""*

An alternative could be that the ecosystem partners define a common solution area combined with a workable geographical Region in which they want to be active together, a so called Business Market Combination (BMC). Within this BMC the ecosystem partners can work with a "drag along" construction: when one of the ecosystem partners enters a new client, he drags along the other ecosystem partners. The advantage of such a construction is that partners are not only stimulated to think more long term, but the wider scope also enables the ecosystem to better learn together and find out how on company level the solution can become a scalable proposition.

- **Platform driven.** This is exactly the second level challenge: manage ecosystem driven innovations on a larger scale. Key is to transform the company or a separate business unit, to a platform driven structure. One of the most exemplary and illustrative business models, were a company has linked their ecosystems to a platform, is that of Deutsche Telekom. This company aims to realize almost 1,2 Billion of new Turnover in 2015 in the relative nascent Machine to Machine industry. Key driver for this growth is expected to stem from their global ecosystem driven business model. Currently around 200 companies, divided over 9 sub ecosystems participate and this number should be tenfold by next year.

The essence of the business model is this:

- Functionally organized set of ecosystems (organized per area, segment and solution)
- United under an overarching theme (Machine 2 Machine market)
- Operating as a platform or virtual market (via Solution Finder)
- Immediate, open communication (Questions are linked to partners)
- Bottom up decentralized innovation (Facilitating, not controlling corporate)
- Accelerated and scalable (Via investment or M&A)

- **Middle man.** When ecosystems are a key growth engine, they will also need 'oil' to keep them running. This 'oil' should be a connecting company. It can be that the client itself takes this role, but it can also be that the ecosystem works with a third party like a consultancy firm. When developing a Smart City project the City of Chatanooga (US) hired their City Consultant HDR. Amsterdam Smart City uses Amsterdam Innovation Motor (AIM) to operate as their 'business society' consultant.

  A Middle Man company improves the performance of the ecosystem on the following key aspects:
  - **Speed.** External companies can quickly and freely communicate on all levels of the participating companies, because of their neutral position. Next to that the middle man company can focus on guiding the process, so the participating companies can focus on delivering content.
  - **Cultural barriers.** Ecosystems are characterized by their cultural diversity. A research driven firm easily collides with a sales driven firm. Construction people have hard times to understand ICT people and vice versa. Ger Baron, Project Leader ICT of AIM, illustrates this: *"Even when there is a client with a concrete need and we place this client in one room with several perfect fitting companies, without help, we see that many companies do not make it unto next meetings."*
  - **Direction**. Ecosystem partners tend to struggle with the higher level of abstract thinking inherent to ecosystem driven innovations. A Good Middle Man company can help to iterate learnings and help to build a broader strategic direction and perspective. This helps to kick start individual ecosystems and drive them faster into a more concrete and stable phase.

- **External financial ecosystem.** To prevent ecosystem driven innovation initiatives get stuck in piloting, learning and demonstration models, we have seen it is smart to quickly build a commercial multi-perspective business case and attract the cooperation of an external financial ecosystem. This will accelerate the innovation process.

**Leanings on ecosystem level**

- Ecosystems are faced with substantial barriers that are deeply rooted in the DNA of our market
- As the character and scope of problems have dramatically increased in complexity, associated risk and required capital investments, companies need to organize themselves in ecosystems. This situation is new and companies still have to learn.
- The basis is to structure the ecosystems lean, functional and interdependent in order to become effective.
- To prevent falling apart before any concrete success is delivered, binding factors like a clear vision and a good business model should be put in place. Subsequently the ecosystem can start operating on a platform that functions as a new common market.
- Last important learning is that successful ecosystems require an objective "Middle Man" company to manage direction, overcome cultural barriers, and increase speed and adaptability.

KSF'S ON ECOSYSTEM LEVEL

| Traditional | Ecosystem driven |
|---|---|
| 2. Limited focus on structure | 2. Functional interdependent ecosystem structure |
| 3. Excluding vision | 3. Emergent overarching vision |
| 4. Asset driven business model | 4. Ecosystem driven business model |
| 5. Company consultants | 5. Ecosystem consultants |
| 6. Discontinuous closed communication structure | 6. Continuous open communication structure |

# Company: barriers, enablers, KSF's

## BARRIERS ON COMPANY LEVEL

- **Sales driven culture**. Many companies still operate based on the following characteristics:
  - **Short term.** Short term target driven cultures can create myopic and restless mind sets that prohibit innovation. Although Cisco works towards a horizontal collaborative business model, in reality she still operates based on a weekly sales agenda. On the other hand Cisco offers free consultancy to boost innovation, where IBM operates their consultancy, also in new initiatives as a profit centre. Both models are not wrong or right, but in daily life can confront ecosystem partners to some difficult challenges.
  - **Linear projections.** Some Boards still think they can autonomously understand, control and dominate markets and thus rely on linear projections. The problem is that one company can never oversee all benefits at hand in the ecosystem.
  - **Metrics.** Either innovations are not measured at all, or they are evaluated against the same metrics as their existing businesses. Financial Institutions are currently heavily positioning on their expertise around clean tech and sustainability. To prevent innovations to be killed, their Incubators often do not use any metrics, nor do they cluster their portfolio into functional operational ecosystems. The consequence is that very few innovations are executed or become mature. We will discuss this example in our Framework in more detail.
  - **Scalability.** Scalability in itself is a good thing. It's what makes companies thrive. The problem is that most corporates are not yet skilled to manage an ecosystem driven business. This reflects a top down and centralized perspective on growth strategy. As a result they are often reluctant to really invest in (local) ecosystem initiatives, because they still regard locality as key barrier for scalability (Which it isn't).
- **Entrepreneurial stretch.** Every company is entrepreneurial in its own way. The problem arises when a company steps out of the regular market dynamics. Then they are not so sure if they can stretch their ideals to the dynamics within the ecosystem. This was also a key challenge within the Smart Energy Collective (SEC) in The Netherlands. This is an initiative in which about 30 energy related companies tried to form an ecosystem in order to develop smart propositions.

*"We stimulate failures. But if not reported, people are exit. Big companies are often too soft on this"*

Sam Collot D'Escury, GEN

## ENABLERS ON COMPANY LEVEL

- **innovative culture.** We found that key enablers for ecosystem driven innovation on company level are the way companies manage failures, how they deal with risk and how they measure innovation. If these cultural aspects are well aligned with corporate strategy, innovation strategy becomes effective.

- **Managing failures.** There is much written around the fact that companies should create a culture were failures are accepted. Most people are right on this. Management by fear or perfection does not enable sound operation in the dynamics of ecosystems. In the words of Sam Colllot D'Escury, what should be added is this: *"Failures are accepted and even stimulated, however, they should always be reported to the responsible managers, so they can take the necessary actions upon it. If failures are not reported, our people are exit. Big companies often play too soft on this."* We would like to add to this that failing is accepted *in the process towards fulfilling the companies mission,* but not failing to finally meet up to that mission. Successful companies are able to deal with this tension. Innovative, but rigorous.
- **Affordable loss principle.** In our venturing arm we have observed many innovative start-ups successfully cooperating in ecosystems. Professor Saras Sarasvathy's *affordable loss principle* is a key element in their cooperative investment behavior: successful entrepreneurs will tend to determine what they are maximally willing to loose, rather then calculating the expected gains.
- **Willingness to share**. Focusing on maximizing individual interest stimulates counterproductive behavior like "owning the client" activities. "*Companies investing in ecosystems, should be prepared to accept that another partner in the ecosystem with equal investment gets out more*", says Frits Verheij.
- **Innovation metrics.** Good companies use metrics to make sure their employees spend time on what really matters. The fact that a new initiative is difficult to measure, doesn't say anything about its potential. Clear is that when setting innovation metrics, single-mindedness should be avoided because this will lead to wrong priorities. The Boston Consulting Group has studied innovation metrics and advises to balance them on *input*, *process* and *output*. We agree with this. Nevertheless, we observed that the focus of most interviewed companies is more on Output, than on input and process.

*“Companies need to obtain the skill to innovate while not fully knowing everything at forehand”*

Pallas Agterberg, Alliander

***Input focused metrics.*** Important Input metrics typically used, are the amount of allocated financial and human resources to innovation activities - Including MT Members. Philips decided to run an Incubator Program and planned to dedicate substantial financial resources during a period of 6-7 years. Although the program generated quite some spin-off, results could have been better. MT involvement was not actively measured. After the initial project owner retired, priority of the program decreased.

***Process focused metrics.*** Of the process focused metrics, we mostly found companies using metrics like time to market or process speed. As mentioned, speed, in terms of starting up and working towards a market ready solutions, if often a barrier. Managing the perceptions of what 'speed' actually is, is therefore key when working in ecosystems. When companies work together on developing a Smart City, it is better to use metrics that are derived from for instance the Aviation Industry, than from the market for switching boxes or lighting controls.

***Output focused metrics.*** Most companies focus on output related metrics. After all, results count. Although the companies we spoke with have limited data on measuring ecosystem driven innovation over a longer period, we will share five different metrics companies used:

- **End user value.** Rosemary Lockhorst, BD Executive of Living PlanIT, indicated they focus more on metrics around end user value than on traditional metrics like Payback Time or Return on Investment.
- **New entry points.** Manuel Oomen, Director Global Alliances at Philips, suggested to use the number of newly generated entry points in the market as useful metric. Especially in area's and market where a company has limited access, this metric can be insightful.
- **Customer satisfaction.** Wim Elfrink, EVP at Cisco, indicated Cisco uses innovation metrics like adaptation speed and customer satisfaction.
- **Adaptation speed.** See above.
- **Revenue growth/new partners.** Markus Breitbach, Head of Partner Development Deutsche Telekom, is very straightforward in setting up his growth plan via his partner platform: He just measures the number of partners and the newly generated revenue.

**Leanings on company level**

- Companies are afraid to fail. Especially in this economic distressful times. Punishing or strongly demotivating failures will not help the company grow. Neither does simply allowing all kinds of failures. The challenge is to create a culture that executes a powerful failure management culture
- Driving people through linear projections, evaluated on weekly or monthly level might help pushing current business, but will not stimulate an ecosystem driven approach for innovation. We can learn from successful entrepreneurs attitude towards risk: they're not blinded by big numbers, but simply check what they can maximally afford to loose. For them key is to solve a problem.
- Implementing a thoughtful and balanced mix of innovation metrics, anchored on Board Level, will help. This means not only evaluating output, but also input and process.

KSF ON COMPANY LEVEL

| Traditional | Ecosystem driven |
|---|---|
| 6a. Punish failures | 6a. Manage failures |
| 6b. Calculate expected gains | 6b. Determine maximum loss |
| 6c. Maximize individual interest | 6c. Be willing to share |
| 6d. Financial Result driven metrics | 6d. Balanced mix of metrics |

# 3 Building the framework

*"The time of centrally planned, top down innovation is over. Distributed, collaborative and bottom up innovation is the future"*

Nicola Villa, Cisco

# Pillar 1: Building ecosystems

Based on the learnings we have derived on context, ecosystem and company level we can develop a framework that helps to unlock new demand, by using an ecosystem model. We have observed that companies can be in different phases of their ecosystem driven strategy. Based on this observation, we have derived 4 Key Pillars that together form a guide for ecosystem driven growth.

- **Background.** Most companies manage their suppliers or partners traditionally but successfully around delivering components for building the required products or service. The disadvantage of such model is that a lot of innovation potential is not used. A consequence is also that these companies often will have to lean on centralized innovation strategies, with inherent long time to market and potentially limited market fit.

- **Challenge.** Companies with intangible products, like Banks, use partners not only for delivering their service but also for discovering new growth markets. Influenced by the "Google" model of organized chaos and selective randomness, a typical Bank might therefore be inclined to create a portfolio of companies with limited interdependency. The result is a lot of ideas, but little commercialization.

- **Approach.** As a first step, we suggest that companies who follow this innovation approach start with evaluating their partnerships on their capability to solve important client issue's within the strategic focus area's of the company. Second step is these companies select their partners on their interdependency, ability and vision to solve problems together with other partners in small virtual teams. Based on this, functional units are created that can emerge into focused ecosystems.

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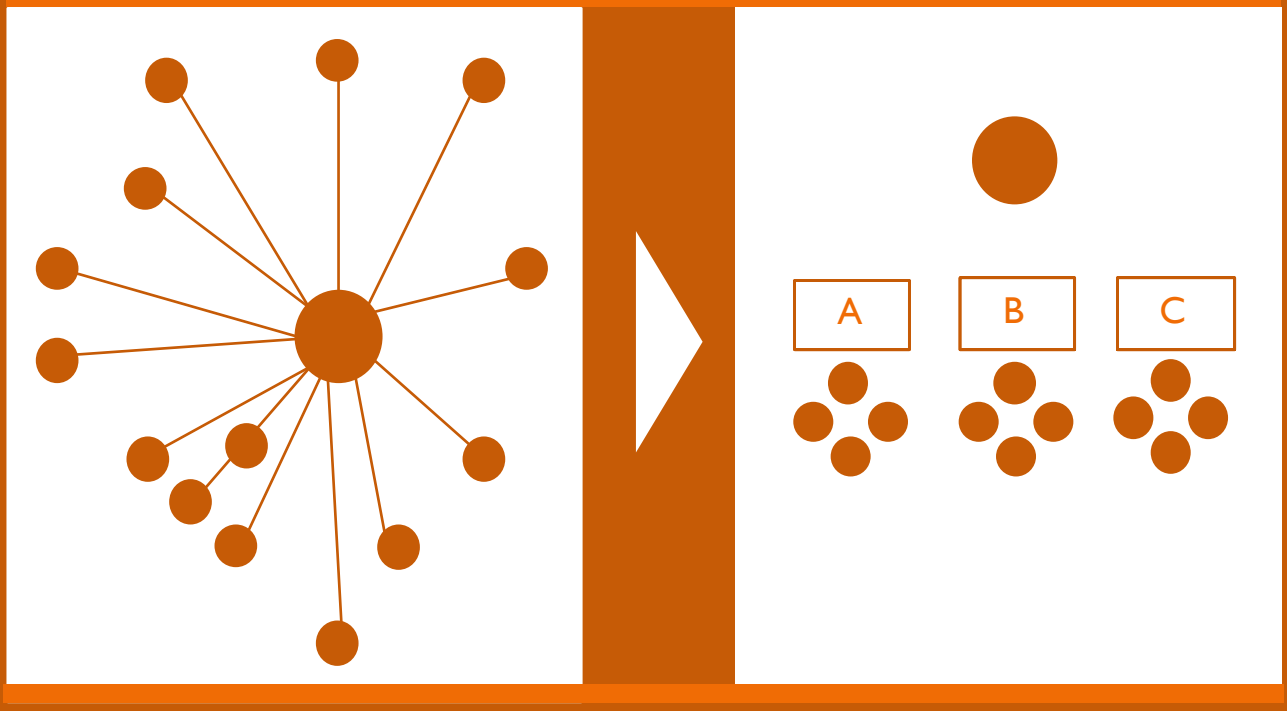
## BUILDING ECOSYSTEMS




- ☑ Define corporate strategic focus markets A, B, C and relate the relevant regions and solution area's.
- ☑ Functionally group existing (and new) partnerships in these area's
- ☑ Select partners on their complementary skills and vision per area
- ☑ Select minimum required number of necessary companies per solution
- ☑ Create several extra layers to minimize dependency/maximize innovation
- ☑ Focus on execution power

**Case Study ABN AMRO: "*Structure partners as ecosystems*"**
ABN AMRO decided to grow via innovation and founded an Incubator
The Incubator developed large portfolio of diverse innovative partnerships.
Percentage of partnerships that resulted in scalable business was too low.

Challenge: At random innovation efforts are inefficient. Reorganize partnerships into functionally and focused operating ecosystems that can execute in strategic key area's.

# Pillar 2: Making it work

- **Background**. The most challenging part is to get an ecosystem functioning smoothly. Companies can create their own ecosystem via partners or they can also participate in them on horizontal level. For both situations we have seen that the 6 key factors we found significantly contribute to the success of the ecosystem initiative: Overarching vision to give direction and meaning, open and innovative cultures that accept risk but professionally manages it by using innovation metrics wisely and involve the MT, long term business model, ecosystem consultant that overcomes cultural barriers and accelerates the initiative, smart communication technologies so the ecosystem works as virtual company and intelligent multi-perspective interactions with Governments.

- **Challenge.** Key problem is binding the partner companies together. We have already explained this. With current (social) communication technologies the number of companies that can rationally form an effective problem solving entity, is bigger then a few years ago. Nevertheless it is critical to the success that this number will stay as low as possible.

- **Approach.** The Smart Energy Collective ecosystem in The Netherlands, therefore decided to appoint 4-5 leading companies out of the 30, in order to increase the decision making speed.

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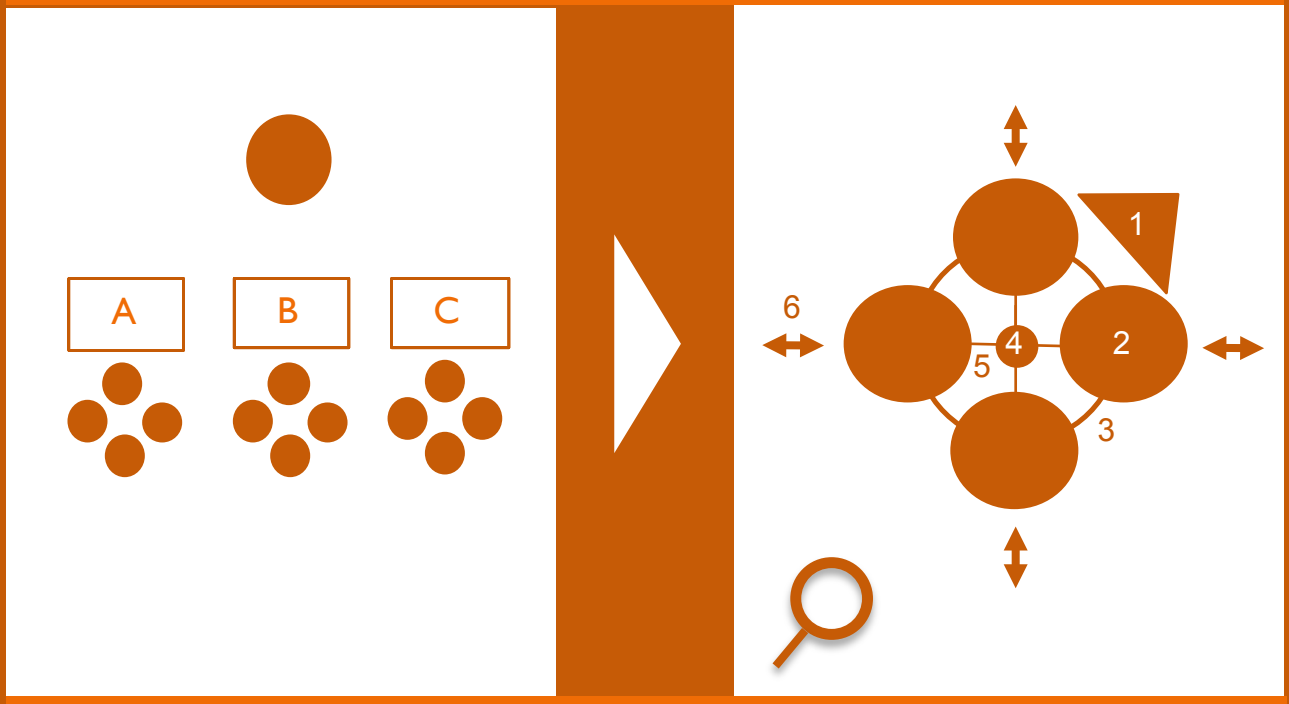
## MAKING IT WORK




1. Let overarching bold vision per ecosystem emerge
2. Open up your culture, adept risk behavior and install innovation metrics
3. Bind the ecosystem partners with an interdependent business model
4. Kick start activities by appointing an ecosystem consultant or 'Middle Man'
5. Accelerate effectiveness by operating as a "virtual company" with intelligent decision making tools
6. Develop smart interactions with Government

**Case Study Smart Energy Collective: *"Professionalize ecosystem"***
About 30 Energy related companies in NL organized themselves around the initiative to collaborate as an ecosystem in order to jointly develop smart energy propositions. So far, the ecosystem faces challenges on how to increase speed and improve direction.

Challenge: Just being organized to innovate is not enough. Increase cohesion & speed by developing commercial vision, a business model and using a decision making tool.

# Pillar 3: Building your market

- **Background.** There are two ways to create scale. One way is to scale centrally by maximizing the number of sales channels per product (e.g. Coca Cola's *at arms length principle*). The other way is to scale decentralized by maximizing the number of products or solutions per sales channel. This is for example what Deutsche Telekom is doing by trying to create a kind of modeled *innovation long tail* by maximizing the number of local ecosystems, ordered per solution type, segment and region.

  Deutsche Telekom smartly combines bottom up learning with top down management by connecting the ecosystems to a centralized platform. This platform ("Solution Finder") is the basis for a future open market system. The platform is expected process a massive number of transactions. This model gives substantial control on the one side, without wasting the open innovation potential in the market on the other side.

  We have observed a few more companies aiming to develop brand new markets based on this type of ecosystem driven models. Because of the premature phase they're in, we will not disclose names. Some consider to use this model primarily to prevent being commoditized in their core business and aim to realize indirect growth and innovation via their ecosystem partners. One of the prerequisites is that these companies have a relative substantial existing (national or global) client base. The big market access, forms the basis for the partners participate.

- **Challenge.** A challenge in this phase is how to manage the interaction from the responsible business unit to the internal organization and the ecosystems. When the market attracts, corporate must be ready to invest, focus and scale. For Deutsche Telekom a problem could become the assumption that only a solid business model will be enough to manage, guide and bind all the partners.

- **Approach**. Without any inspiring vision, except for the financial and innovation potential, continuity can become challenging. By directly start monitoring the market, iterating the learnings and use them to let an overarching vision emerge DT can pursue a goal that is both inspiring and clearly actionable for all partners.

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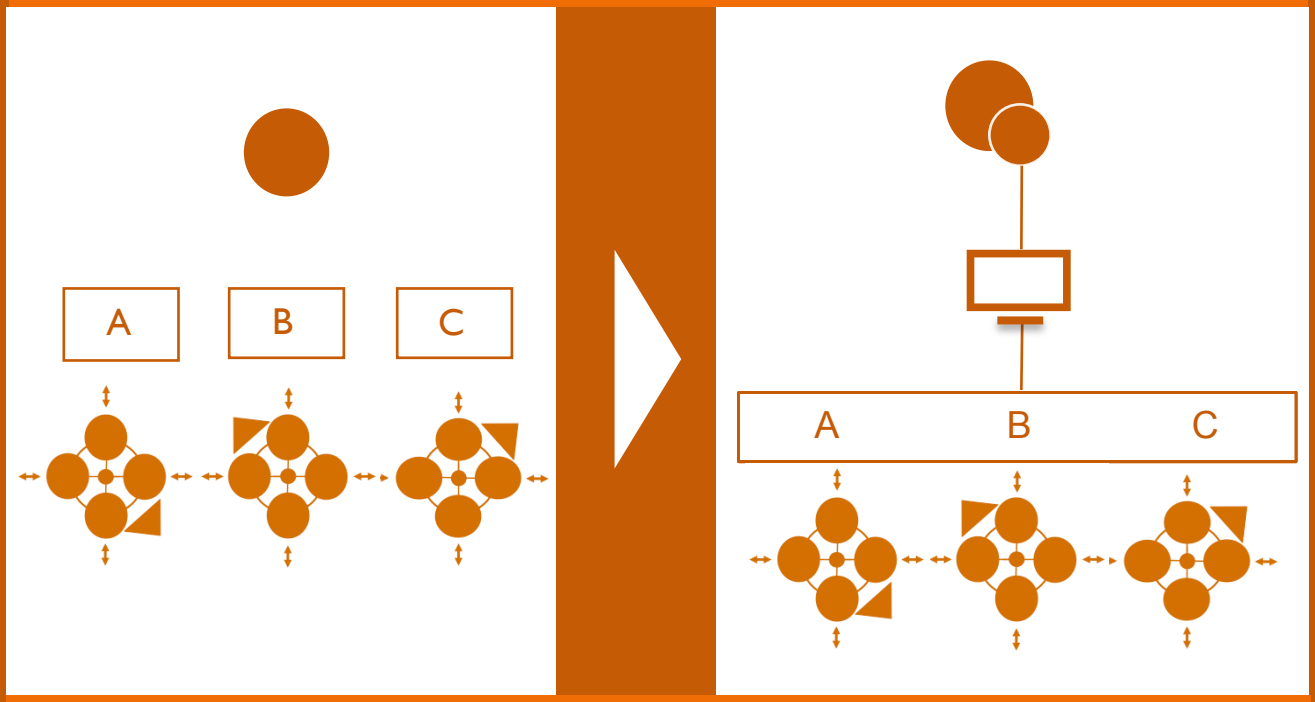
# BUILDING A MARKET




- ☑ Define your key growth market
- ☑ Link the ecosystems to a platform that operates as a virtual market
- ☑ Appoint team that operates as "company in a company" to manage the platform
- ☑ Embed your activities strategically in the main company
- ☑ Build a business model in order to capitalize on the transactions in your market (e.g. License fees, transaction fees, partner fees, M&A, Investments etc.)

**Case Study Deutsche Telekom: Build vision, while developing**

DT faces commoditization in an unpredictable, fragmented M2M market. As growth stayed out, DT decided to create the demand via an ecosystem driven model. DT Can capitalize via 3 angles: revenue via transaction fees on their platform, M&A or investment in successful partners and newly created demand for their core business

Challenge: The market model is ready, but the platform and ecosystems need to start functioning. Key challenge is bind the partners together and under an overarching vision.

# Pillar 4: Expand your market

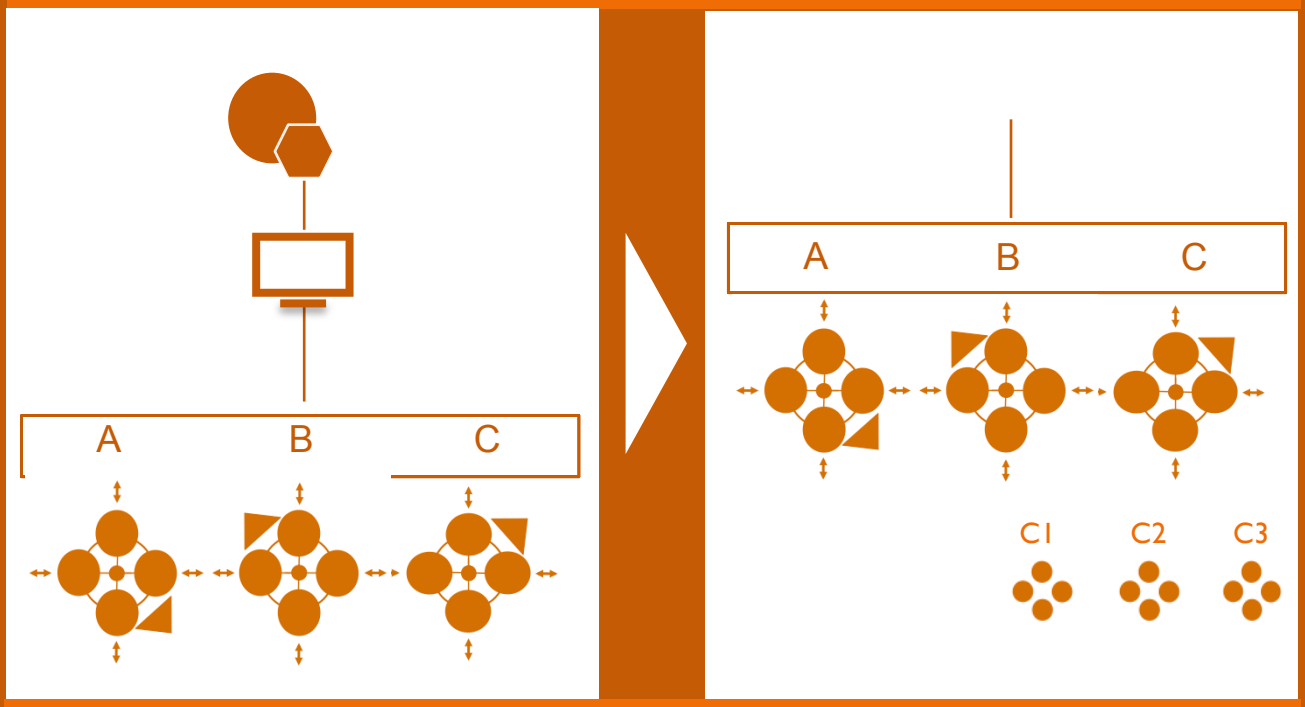
- **Background.** When enough partners are linked to the platform and the virtual market generates a lot of transactions in each ecosystem segment, it is expected that the market will become more demanding. The next phase will therefore require the separate segment ecosystems to start collaborating together to develop more elaborate and integrated solutions. Let's clarify this with an example.
  Because of budget and capacity constraints in the US Healthcare market, Wal-Mart decided in 2007 to set up 400 clinics offering primary health services in cooperation with RediClinic. Currently around 140 Clinics are running and most services are planned to be available in 2012. In line with this disruptive strategy, also more advanced and innovative healthcare solutions are expected, since the huge traffic Wal-Mart generates, is an ideal exploration and pilot ground for smart relative low cost solutions. This development requires integrated solutions. Therefore several segment ecosystems (like Public, Health, Retail and Finance segments) have to work and together via an advanced solution centered platform. Around the retail segment complete new sub ecosystems can emerge that develop and deliver these smart healthcare solutions. To manage business potential, the focal company can either choose to shift towards a horizontal platform driven structure or, in line with Harvard professor Christensen's advice in *The Innovators Dilemma*, externalize their project team into a separate platform company.

- **Challenge.** Living PlanIT is one of the few companies who's business model is almost 100% based on ecosystem revenue's. The fact that this company is fully ecosystem driven is not strange, since it reflects the complexity of their market - (Smart) Cities. These are in in themselves entire ecosystems. With economic down turn, the market for Smart Cities will evolve slowly, which places a financial challenge on Start Up companies like Living PlanIT.

- **Approach.** Taken into account what is described above, parallel growth schemes emerge for Living PlanIT. This company has categorized their Smart Cities into segments. We expect their ecosystem model also offers great potential to expand the market of Smart Cities towards decentralized partner segments like Healthcare. In the given example LP could capitalize on the need for a compatible operating system that is also able to analyze a large number of data.

4

## MARKET EXPANSION

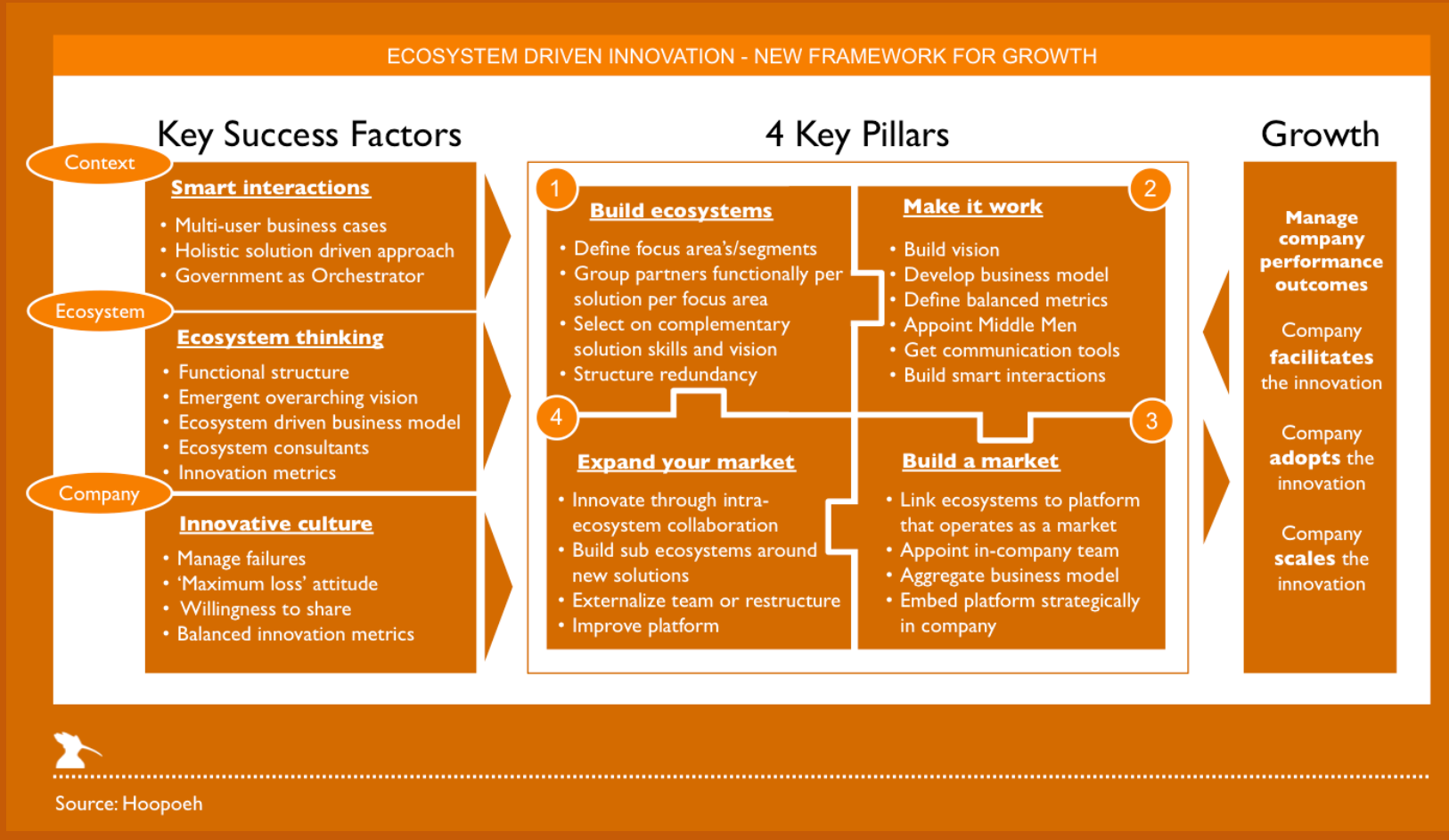



1. As market dynamics are changing via your platform, re-analyze market needs
2. Externalize management team, or decide to move towards horizontal platform structure, to fully focus on market expansion
3. Improve platform in order to professionalize interactions between ecosystems
4. Start to assist new product market combinations in one of the segments
5. Build new ecosystems around this

**Case Study Living PlanIT: "*Capitalize on reversed innovation*"**
Living PlanIT is expanding their partnerships in order to build a smart City in Parades Portugal. The City is structured into several segments/portfolio's and LP operates as a Middle Man company that manages the entire ecosystem. Low economy in Europe endangers a fast realization of any Smart City.

Challenge: Staying on speed. Generate revenue first in partner segments (e.g. ,Healthcare, Energy, Retail). Decentralize innovations down to partner segments –
i.e. reverse innovation - for smaller modular solutions to be developed in decentralize ecosystems. Select partners on interdependency and solution skills.

# New framework for growth




Source: Hoopoeh