

**ENERGY  
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# **An innovators' guide to navigating market integration risks**

September 2021

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**Innovate  
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**Transforming  
Energy  
Access**

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*Energy Catalyst is an Innovate UK programme with co-funding from the Foreign, Commonwealth and Development Office, Global Challenges Research Fund, the Department of Business, Energy and Industrial Strategy and the Engineering and Physical Sciences Research Council. This material has been funded by UK aid from the UK government; however the views expressed do not necessarily reflect the UK government's official policies.*

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## 1. Introduction

# Why do great and well-executed innovations still sometimes fail?

Companies are often focused on *execution*: how to deliver on time, to spec, beat the competition and make sure the end customer is happy.

But increasingly, innovation is not autonomous. You may be *part of an ecosystem* and not just selling to the end customer in isolation.

It is not always *explicitly clear* how your success depends on others, and this blindspot can lead to failure.



## Looking beyond execution

Great execution is a necessary but insufficient condition for success in the innovation landscape.

This research will focus on the following two distinct types of risks that arise from innovation market ecosystems:

### Co-innovation risk

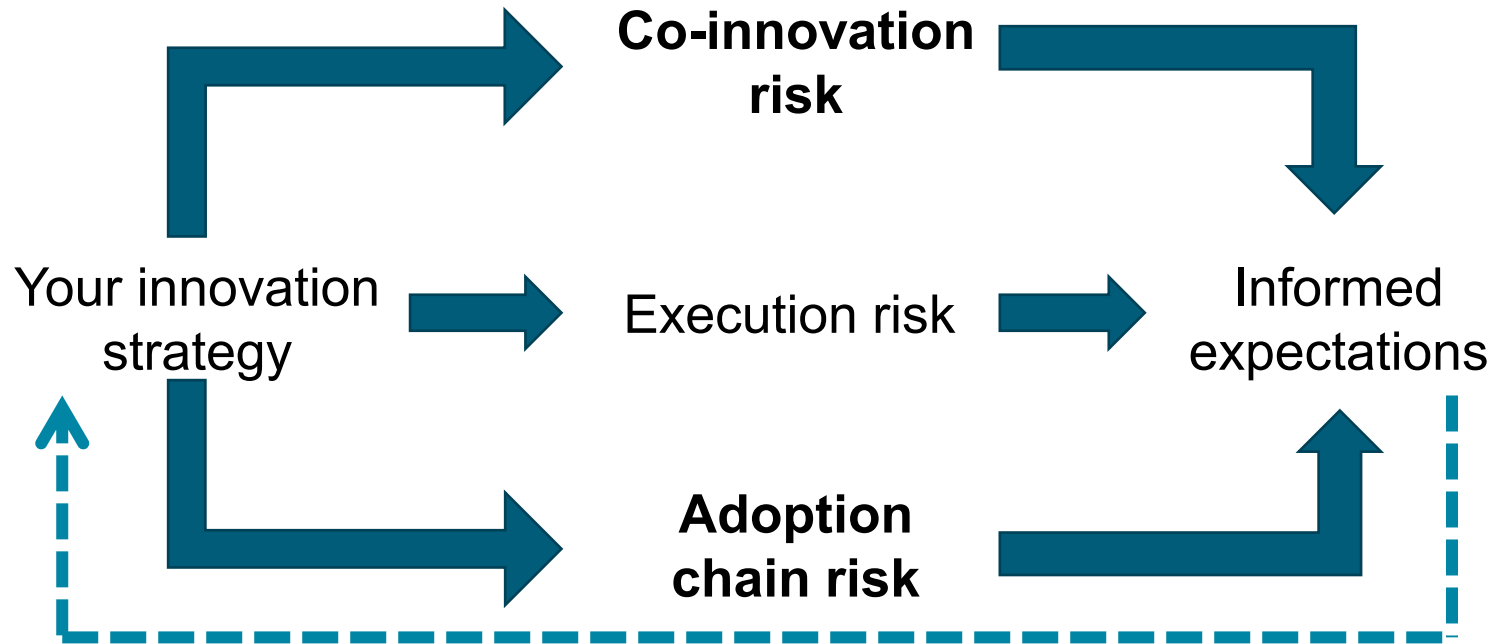
To what extent does your success depend on the successful roll-out of another (external) innovation?

### Adoption chain risk

Who needs to adopt your innovation for the end customer to get the complete value of your offering?

## Seeing the interaction between the different risks

*Looking beyond customers, capabilities and competition*



This perspective enables a change in thinking from “if we build it they will come” to “if we build it, how will *they* get there?”. If the answer to the latter is “we dont know”, then this is important to resolve before committing a lot of resources to the innovation. Also, the focus is broadened from the end customer to all the different stakeholders who need to adopt the product.

## **2. Understanding the two main types of innovation ecosystem risks**

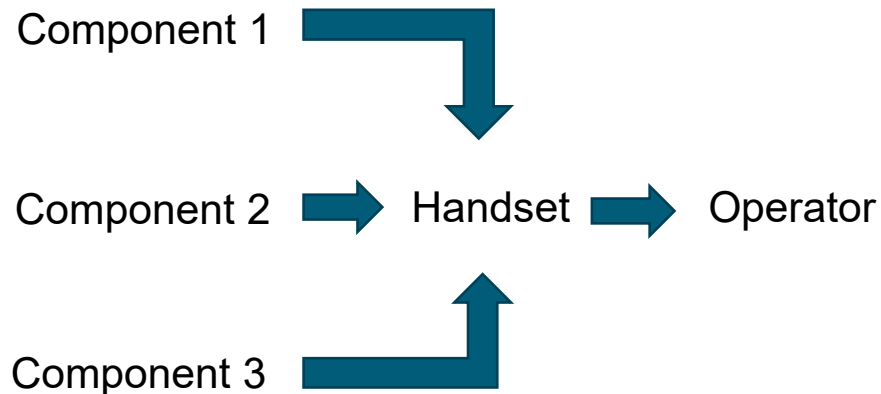
Co-innovation & adoption risks

## Co-innovation risk

*With greater collaboration comes greater dependence*

It is important to not only keep an eye out for potential hurdles to your innovation but also to those of your collaborators.

*Example: Nokia and 3G*



Main elements of execution risk for 2G

In the 2G environment, the route to market for Nokia was straightforward.

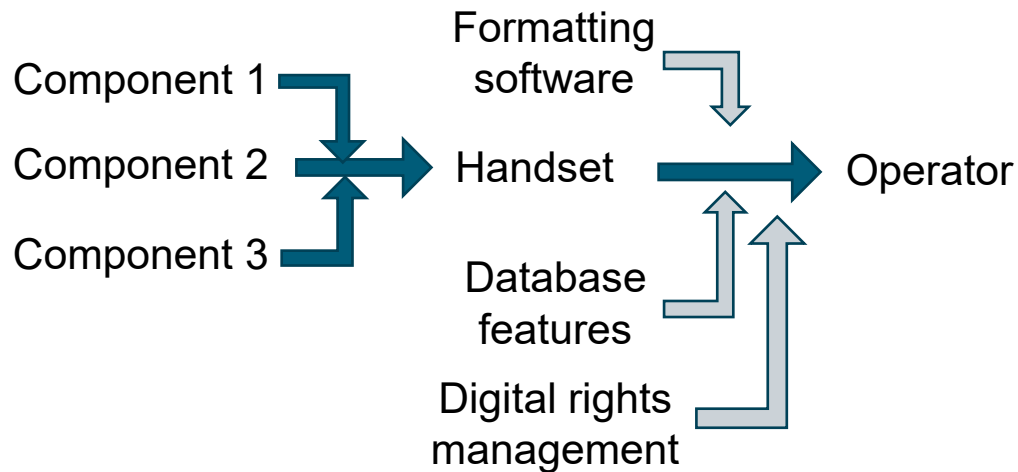
Although it was not an easy feat (bringing together batteries, chipset, display, storage etc.), the risks were internal and controllable.

This required excellent execution focus, which Nokia had a mastery over.



## Co-innovation risk

*With greater collaboration comes greater dependence*



Execution and co-innovation risks for video streaming in 3G

For 3G, the ecosystem looked quite different. The traditional execution focus that Nokia had mastery over was insufficient to enable success. There were external co-innovation risks that Nokia did not have any control over (software, digital rights management, etc.), which were important innovations that Nokia's handset depended upon.

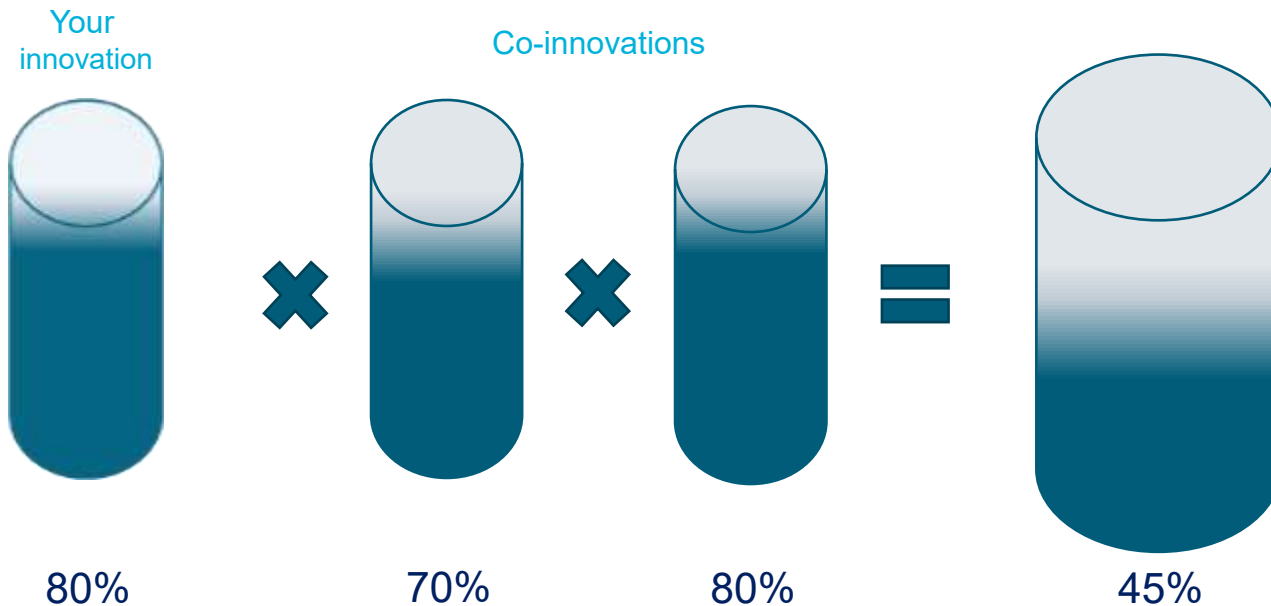
Despite producing the first smartphone, they needed to wait on other innovations to catch up, which led to a market failure of the innovation. Hence, although Nokia won the race, it turned out to be a race to the starting line.

Similarly, Philips created a HDTV all the way back in the 1980s, but the external co-innovations of HD content creation equipment lagged way behind, leading to the HDTV's failure.

## Co-innovation risk

*When you aren't innovating alone, the odds of success may be reduced*

Consider the probability of success of each co-innovation. Here, success is not just about **IF** but rather **WHEN**.



If you are 80% sure of your innovation's successful delivery within time, but depend on other (equally highly likely) co-innovations to succeed within a certain time period, the total probability of success is reduced.

Your customer's ability to successfully experience your value proposition depends on your chances of success *multiplied* by all the co-innovators' chances of success.

This can significantly reduce your ability to deliver, even if you are quite confident of being able to deliver your own innovation on time.

In this example, 45% may still be a good probability of success, but more than the actual number, it is important to have a realistic evaluation of the co-innovation risk and plan your strategy accordingly.

## Co-innovation risk

*When you aren't innovating alone, the odds of success may be reduced*

- > Typically, innovators use their intuition when considering whether co-innovation will be successful. However, predicting when it will be successful might require deeper thinking and could significantly impact the success of your innovation.
- > Share this with your co-innovators. Do they agree with your assessment? Why/Why not?
- > What are your options in this scenario?
  - > Is it better to adapt your offering to exclude a low probability co-innovation?
  - > Or to pursue multiple low probability co-innovations?
  - > Does a reduced offering as phase 1 of your product make sense, while waiting on co-innovations to come through?
  - > Or do you have the means and motivation (and does your customer have the patience) to work through these co-innovation risks over time?
- > Answering these questions can help form a better innovation strategy.

## Co-innovation risk

*Example: 3D Television, a case of major dependency on co-innovations*

**3D TV is finally, blessedly, mercifully, dead — will VR follow suit? 3D TVs are dead**

By Joel Hruska on January 24, 2017 at 11:15 am | 102 Comments

John Biggs @johnbiggs / 3:41 PM GMT+1 • January 25, 2017

## Why didn't 3D movies and TV ever catch on?

**3D TV is Dead—What You Need To Know**

Why 3D TV died, and what's ahead for its fans

by Robert Silva Updated on November 02, 2020

reviewed by Christine Baker

By Chris Morris  
August 18, 2020

## Why 3D TVs Never Really Had a Chance To Succeed

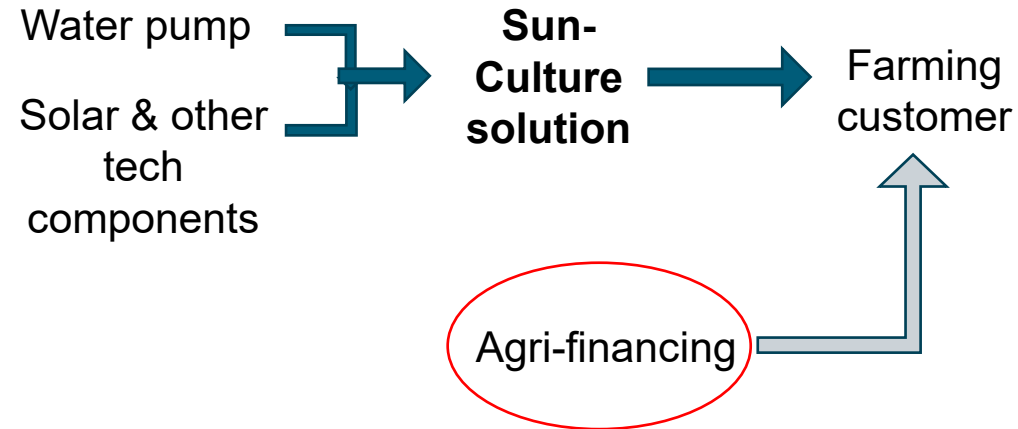
By Jonathan Knoder July 28, 2020

3D TVs launched in the previous decade did not see much success. However, the TVs produced were affordable, high quality and worked flawlessly. The failings are mainly due to co-innovation failures. Some of these are:

- > Content and content production (without external content, the TVs are not very useful. Producing 3D content needs new and affordable production equipment).
- > Wearable devices (same as the above, but on the viewer side).
- > BluRay players (Not all BluRay players are capable of playing 3D).
- > Data transmission on networks (a new transmission framework is required for broadcasting simultaneously on 2 channels for 3D, not just 1 as with 2D).

## Co-innovation risk

*Example: Solar water pumping solutions from SunCulture*



SunCulture's co-innovation risk

Solar-powered irrigation systems specialist SunCulture realised that customers were unable to purchase their solar-powered water-pumping equipment. Lack of appropriate financing options meant SunCulture had to begin providing financing for the farmers.

Here, SunCulture were (made) aware of the co-innovation challenge when they went to market and decided to meet it themselves. Thus, the financing intermediaries were replaced by SunCulture's new in-house debt financing facility.

This is a recurring theme with many successful and established companies in the energy access/impact space. However, not all companies will have the resources or inclination to vertically integrate in this manner.

Doing everything in-house also limits the potential for scaling up, since resources are spread out across multiple non-core offerings. This makes it even more important to identify co-innovations early on and adjust the innovation strategy accordingly.

## Adoption risks

*Costs and benefits: differences in the innovator's and customer's perspectives*

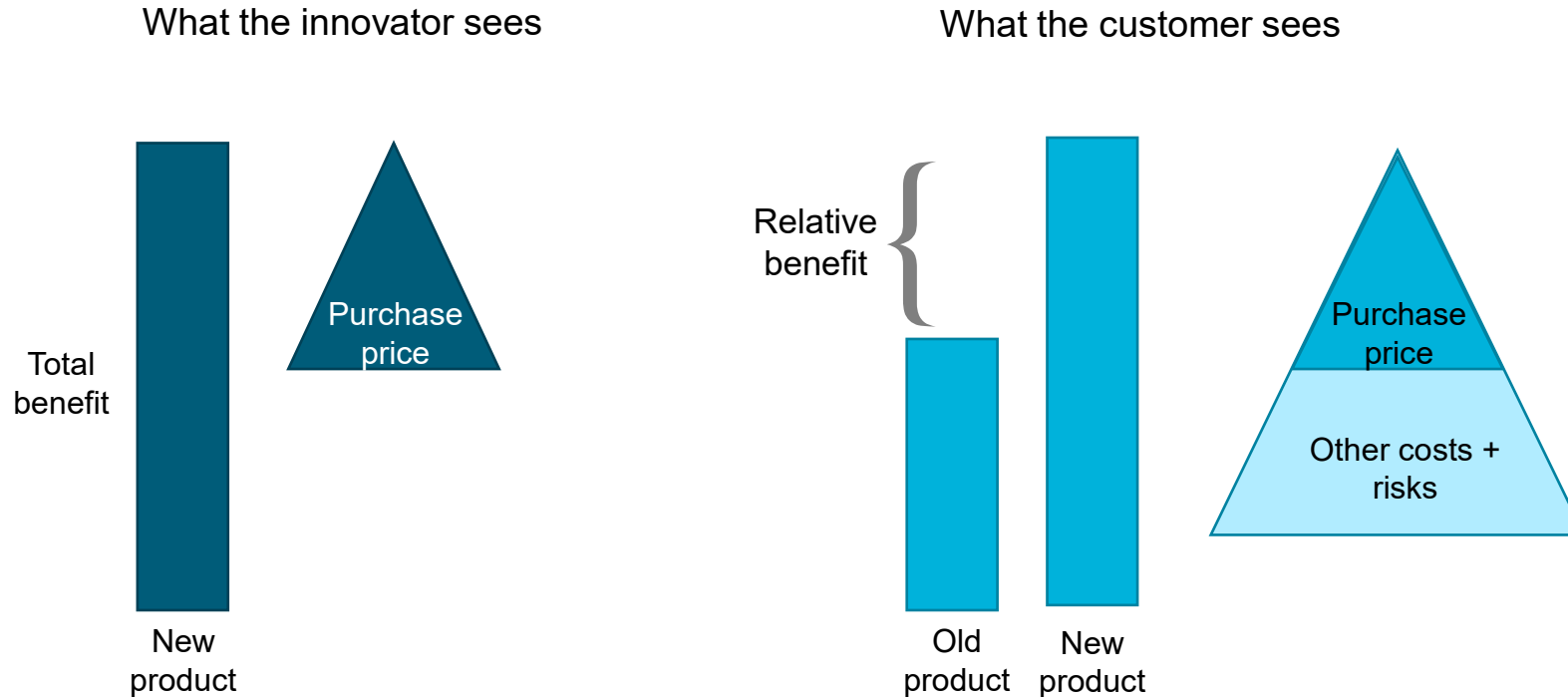
Innovators see a particular value of a product from their perspective. If the total price is below the total benefit, it creates a net surplus (+) in value. This product is then ready for its execution strategy. If the price is higher than the benefit provided, it creates a net deficit (-). This requires additional work on the product (such as reduced pricing, added features, etc.).

Innovators and product managers have to keep this value creation in mind and also consider the customer's perspective. The benefit and costs, as seen by customers, are not necessarily those as foreseen by the innovator.

The customer could have existing products that provide some of the benefits of the innovation already. Additionally, in terms of costs, there are other costs to consider from the customer's perspective. These costs are both monetary (purchase price, staffing, training, etc.) and non-monetary (hassle, time, risks of changing an old system, etc.).

# Adoption risks

*Costs and benefits: differences in the innovator's and customer's perspectives*



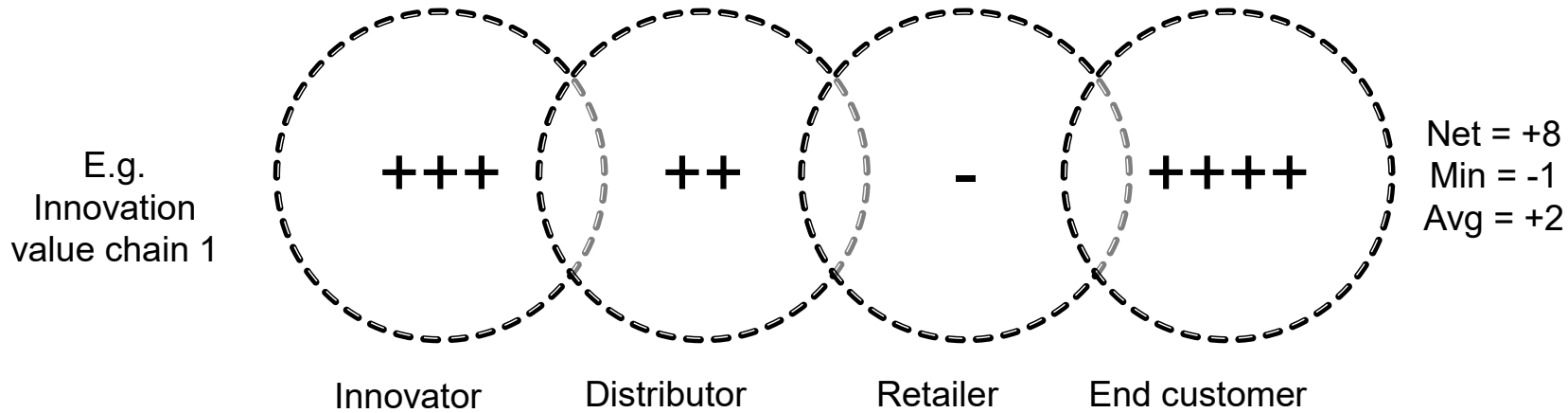
Do your innovation strategy and adoption expectations account for the relative costs and benefits for the customer(s)?

Even free products do not always see adoption. For example, a new version of MS Office.

This view of the *relative* cost and benefit can be especially easy to miss for many other necessary customers other than your end customer.

# Adoption chain risk

*The adoption risk, but times n*



In order to assess the adoption chain risk, the value of the product (either level of surplus +, ++, +++) or (deficit -, --, ---) should be assessed from each of the intermediary's perspectives based on the relative benefit they see.

Every intermediary should be treated as a customer who needs to adopt your product (and therefore needs to see a net surplus value) for it to work.

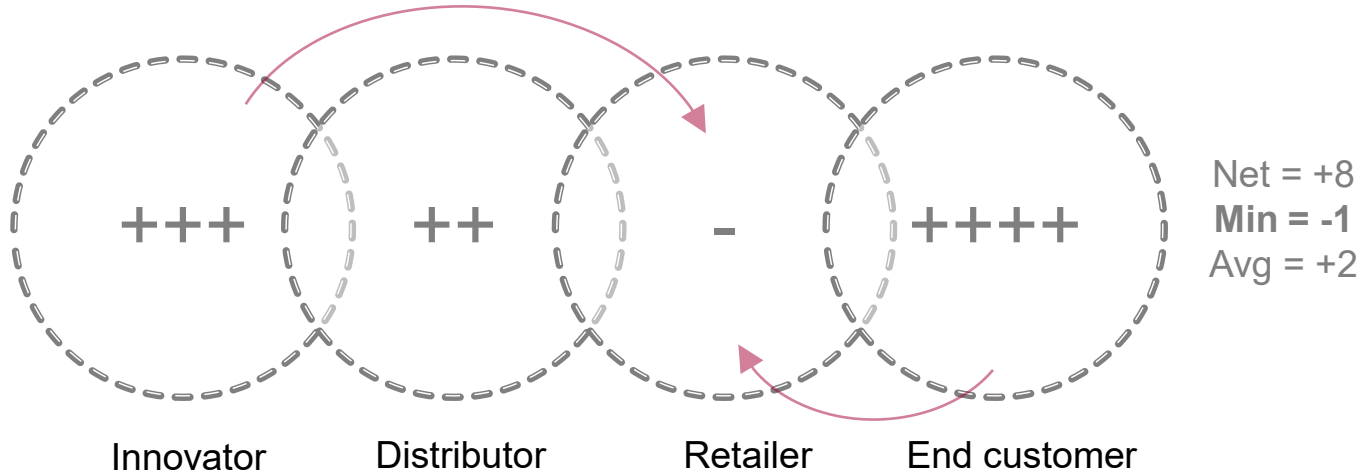
Here, the total value or average value across players doesn't matter as much as creating a surplus for every customer in the chain, since it is only as strong as the weakest link. In this case, this is the link that sees little surplus or even a deficit when adopting your innovation over the status quo.



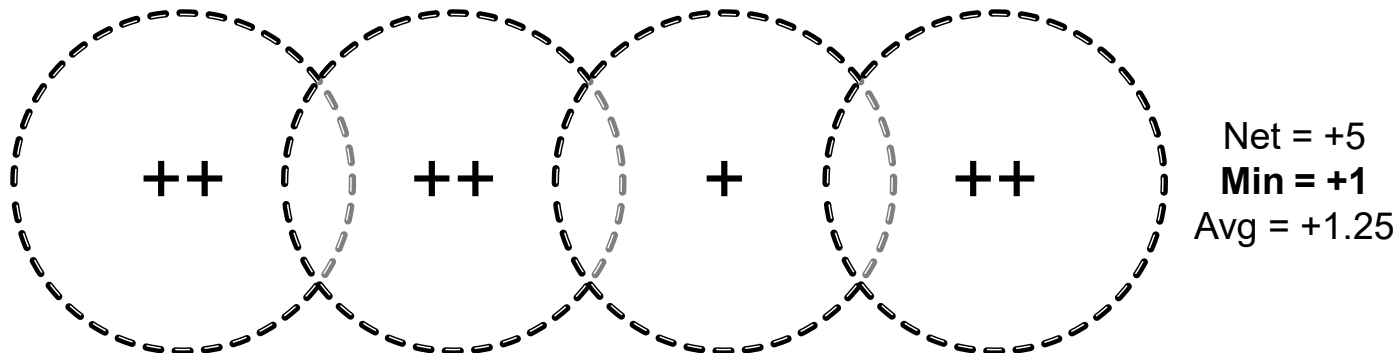
# Adoption chain risk

*The adoption risk, but times n*

E.g. 1  
Innovation  
value chain 1



E.g. 2  
Innovation  
value chain 2



A deficit to even one of the customers in the chain (e.g. Nr. 1) can render the adoption by the end customer very unlikely, irrespective of how much value it creates for the others or in total. It might be better to reallocate some of the surplus from other players to the ones who see a deficit, to ensure there are no weak links as is the case in the e.g. Nr 2.

Two tasks at hand:

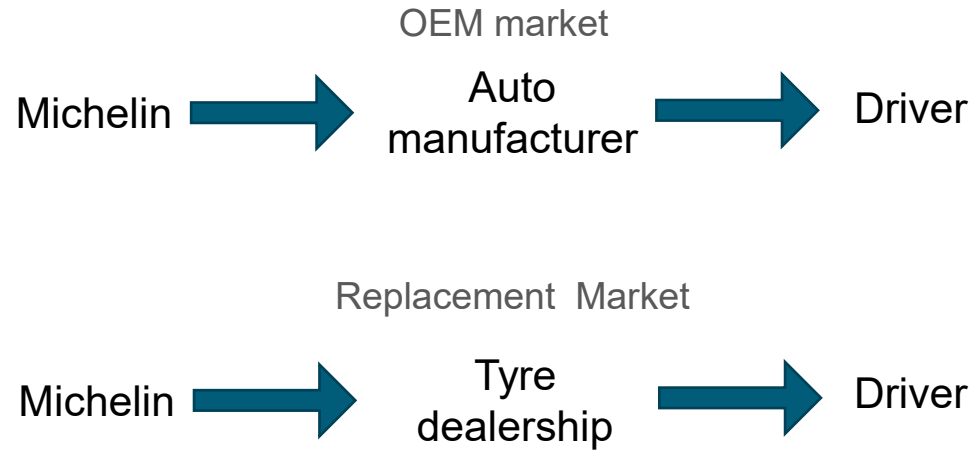
- > Identify all the links in your ecosystem value chain.
- > Ensure every customer sees a relative benefit.

Who is the most important customer in the adoption value chain? All of them!

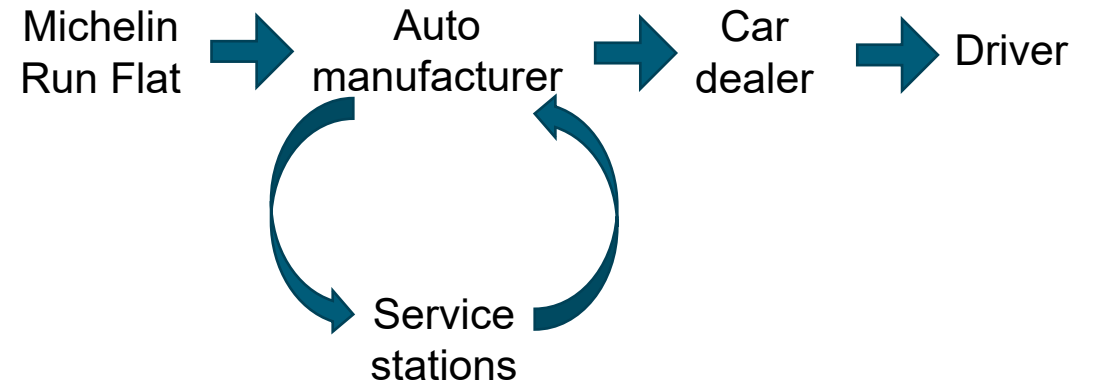
Do you need to move from innovating a product to innovating an ecosystem?

# Adoption risk

Example: PAX “Run Flat” tyres by Michelin



Different routes to market for tyre innovations



Route to market for the PAX technology

When Michelin innovated a new type of tyre that could run for a long time despite a flat, they focussed on technological innovation. They assumed their legacy routes to market (OEM and replacement) would hold. However, since this was a new technology, it needed special tools to be replaced and repaired. Service stations did not buy these machines since there weren't many cars with this technology. Therefore, customers were not as keen on these tyres since there weren't many places that could service the flat tyres. Hence, the innovation did not succeed due to poorly understood adoption risks. Intermediaries who were always involved in, but remained on the sidelines of tyre adoption, became central to their success. Is your product disruptive to existing links?

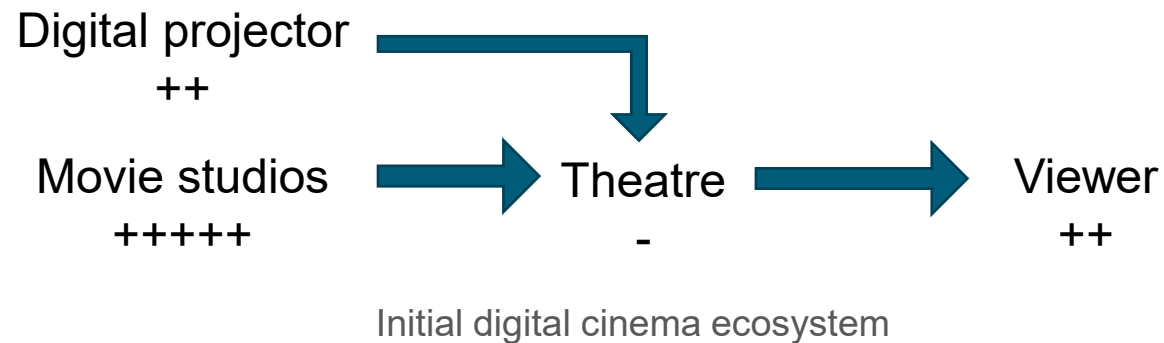
## Adoption risk

*Example: Digital cinema, ushered in by movie studios, shows that identifying all links in a chain isn't enough*

A win-win proposition:

- > High cost of celluloid, lack of scalability, the operational hassle of managing releases, reduced piracy, etc.
- > Better experience for the viewers.
- > Reduced running costs for theatres (staff, equipment, film management, etc.).

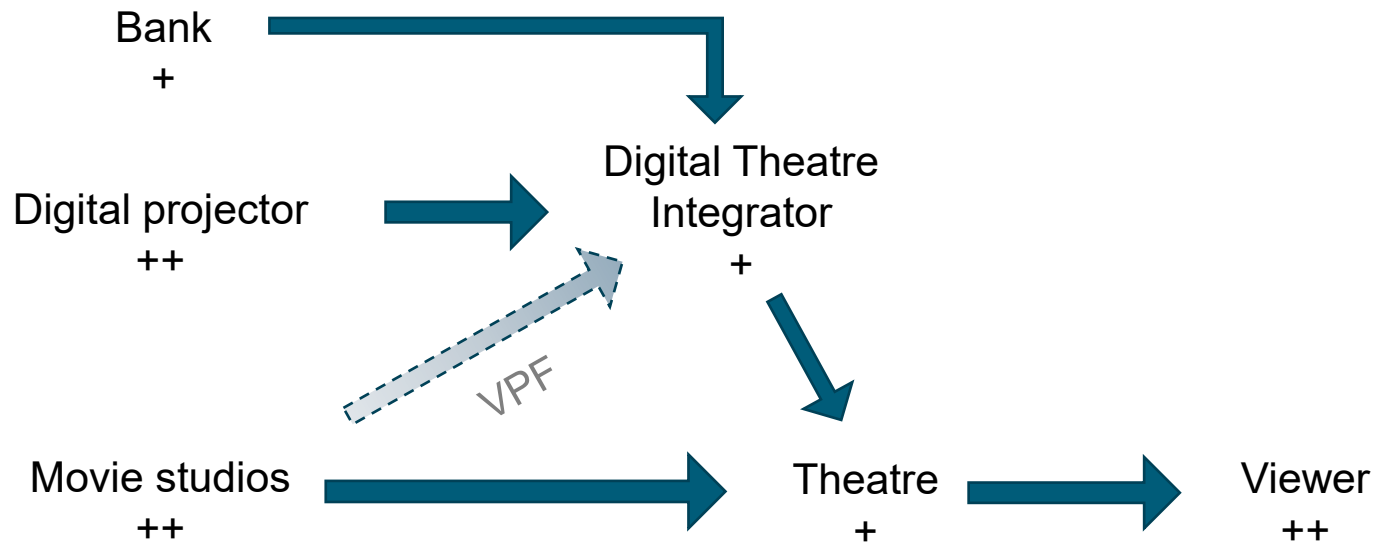
There was an external co-innovation risk of developing digital standards across all studios, which was foreseen and appropriately managed.



## Adoption risk

*Ecosystem innovation required to address the low relative benefit to the theatre owners*

The studios reduced their own benefit by reallocating some money per movie to the integrator, who pays for the theatre's projector upfront.



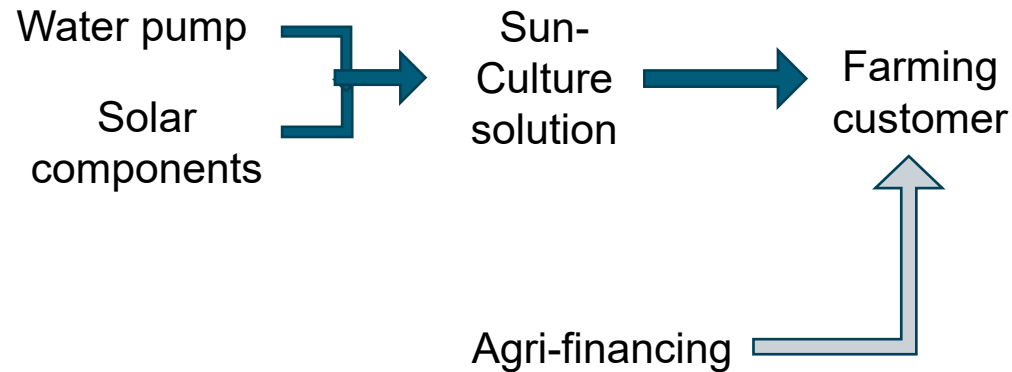
A modified ecosystem with the introduction of the Virtual Print Fee Solution

Although the adoption chain was simple and clear, the relative benefits were not shared by all. By reducing their own benefit in the short term, studios were able to eliminate weak links in the adoption chain.

The integrators have a lease-to-own contract over 5-10 years with the theatre whose costs are subsidised by the studio. This changes the relative benefit of the Theater from a – to a +.

## Adoption risk

*Adoption risks can also come from the end customer and can be difficult to respond to, due to external dependencies*



SunCulture's adoption challenges

SunCulture identified that the adoption of their water pumping devices directly depended on their end customer's ability to pay via affordable agri-finance products made available to them.

Energy Catalyst-funded M-KOPA decided to add a refrigerator to its portfolio of solar appliances. This was aimed at productive uses, such as cold drinks etc.

Surveys suggested customers were interested in a larger fridge than one initially designed. Changing from 50l to 100l didn't come without challenges. Aside from customer preferences on the optics of what real fridge looks like (chest vs cabinet), the increased size meant that they were unable to repay the costs of these devices with the existing revenue generated.

Changing customer preferences are harder to respond to when there is an external dependency on the product development partner.

## Other adoption risk examples

### *Startups from Philippines with adoption challenges*

Start-up (year founded)	Description / Product	Website / Page	Case / Risk
Pinoytravel (2013)	An online aggregator for the 115 long distance bus companies in the Philippines. They are the first online bus booking reservation system in the country.	<a href="https://www.pinoytravel.com.ph/">https://www.pinoytravel.com.ph/</a>	End consumers: commuters/passengers
			For the consumers to fully experience the seamless book-and- ride experience, the bus companies needed to be integrated into the platform, which meant their ticketing process had to be automated. Most bus companies did not have the capacity and resources to do so, which resulted in Pinoytravel hiring ticketing agents to mediate from the reservation app to the actual ticket sale.
Mychild (2014)	A mobile app that keeps parents updated about their children's performance in school as well as their activities.	<a href="https://www.techinsiasia.com/mychild-parents-teachers-communication">https://www.techinsiasia.com/mychild-parents-teachers-communication</a>	End consumers: parents
			The idea was an easy sell to parents of different ages. However, they were unable to deliver a compelling value addition to the school and teachers that needed to adopt the app before the parents use it. It was just an extra task and expense for the school, and the teachers preferred not to provide parents with too much visibility on the students' activities.

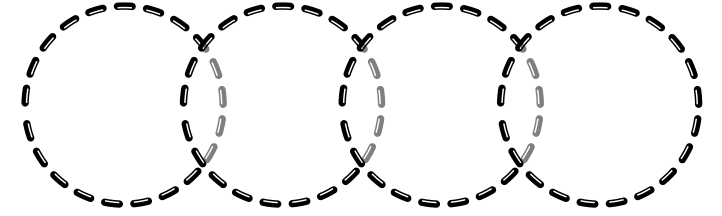
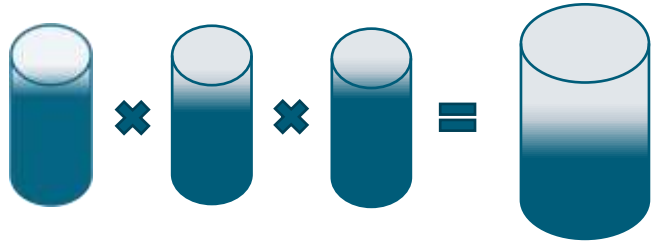
## Other adoption risk examples

*Startups from Philippines with adoption challenges*

Start-up (year founded)	Description / Product	Website / Page	Case / Risk
Sure Lotto (2018)	A mobile app that allows the online purchase of lottery tickets and notifies buyers of results.	<a href="https://surelotto.ph/">https://surelotto.ph/</a>	End consumers: Lottery ticket buyers/lottery ticket kiosks
			The company was unable to convince the regulators and the regional lottery offices to adopt the platform. For the system to scale, it needed to be fully integrated into the regulating agency's (Philippine Charity Sweepstakes Office) process, and scaled-down from the regional branches until the local kiosks.
Tactiles (2014)	An educational toy that helps children learn electronics while playing.	<a href="https://www.tactiles.io/">https://www.tactiles.io/</a>	End consumers: STEM learners / STEM teachers
			The initial idea was to market the product as a teaching aid or an educational product to supplement the modules on electronics for the STEM curriculum. However, they failed to predict that it needed to be fully adopted by the school and approved by the Department of Education.

## Considering these concepts for your company

### *Co-innovation and adoption risks*



- > Are you aware of your co-innovation risks and adoption risks? Or have you been intensely focussed on execution?
- > Is it something on your radar which you plan to tackle later but not now?
- > Do you have none of these innovation ecosystem risks? Or are you unable to see any at present?

**Note:** These concepts can be applied to internal as well as external ecosystems. However, for small and young startups, these are likely to be mostly external. Additionally, this concept can be used when entering new markets. How do new geographies affect your ecosystem?



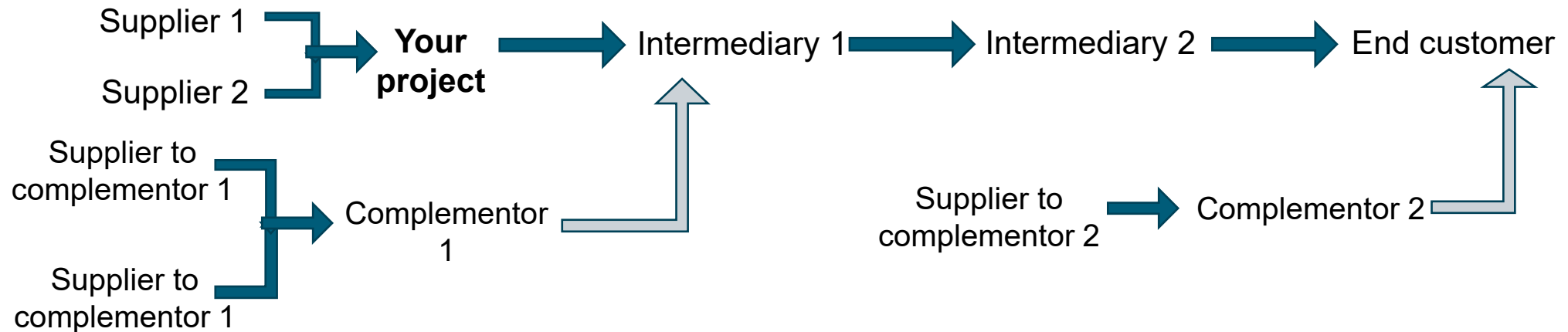
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**3. How can you apply this thinking to your innovation?**

# Mapping the value chain

*Moving from value propositions to value blueprints*

Use this tool to map not just supply chains but also the location and links of complementors who may lie off your path to market:



A generic value blueprint that can be modified to map the actors and linkages in your ecosystem

Innovation strategies that call for collaboration might make implicit assumptions about its structure. The aim of this exercise is to make the assumptions of that ecosystem explicit - by clarifying who needs to come together, where exactly they will be positioned and what risks exist within the plan.

## Mapping the value chain

*Moving from value propositions to value blueprints*

Answering the following questions can help in developing the value blueprint:

- > Who is the final target of the value proposition?
- > What do you need to deliver?
- > What inputs do you need to construct your offering?
- > Who touches your innovation after you, and to whom do they transfer it in the way to the end customer?
- > Does anything else need to happen before this intermediary adopts the offer and passes it on to the end customer?
- > Finally, to identify risks of co-innovation and adoption:
  - > How able is the intermediary to undertake their activity?
  - > How willing is the intermediary to undertake their activity?



## Mapping the value chain

*Look at what the value blueprint tells you*

### Assigning risks to co-innovation

- It is ready
- Not ready but planned
- Not ready and not planned

### Assigning risks to adoption

- Eager and willing
- Neutral, open to persuasion
- Seems to prefer the status quo

Once the above exercise is complete, for every partner whose risk is not green, try to understand the cause of their problem and identify a viable solution.

Update the document regularly as actors, relationships and risks change. Even time and external events can influence a value blueprint.

## Mapping the value chain

### *On using the value blueprint*

These are the three main stages to prepare your value blueprint:

1. Identify the full set of partners and specify their positions (suppliers, intermediaries and complementors).
2. Identify changes in activities and the expected links from each participant.
3. Assess how the changes affect the likelihood that the entire system will come together to deliver the product.

**Side note:** As an innovator in the field, you might know your ecosystem's blueprint intuitively. But intuition is sometimes insufficient, especially when you also need to convince others or verify assumptions in a dynamic and complex ecosystem.

This is even more important when people on your team disagree, e.g. team members with different intuitions. A framework like this can help move the discussion from a battle of gut instincts (swayed by reputation, experience or hierarchy within a company) to an organised comparison of assumptions about the fundamental structure of the situation.

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## 4. Case studies

Two detailed examples of applying this framework to help guide you towards creating your own value blueprints

## Case study : Co-innovation & adoption chain risk

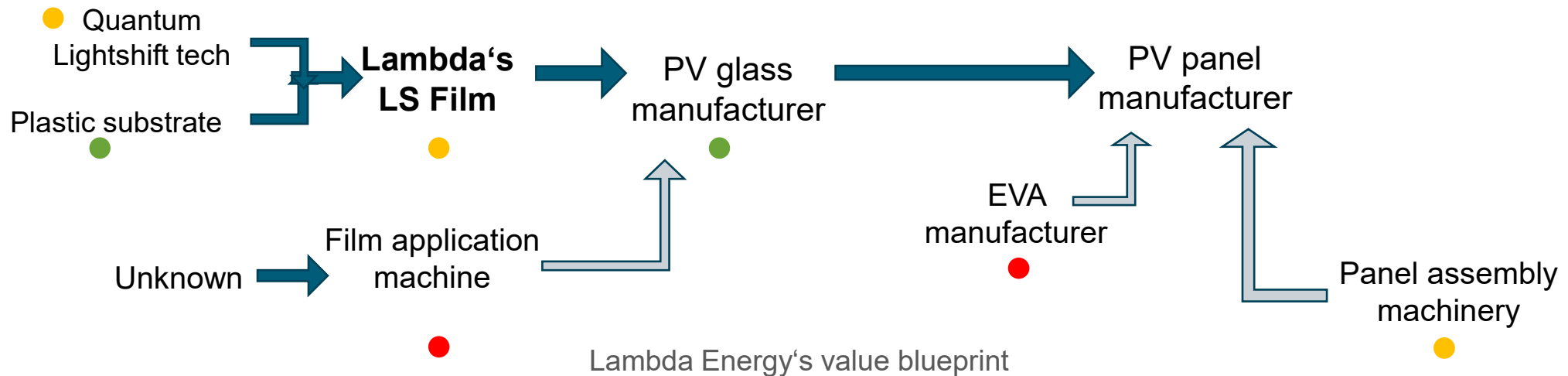
*Lambda Energy and their Quantum Lightshifting films to increase efficiency of PV panels*

Energy Catalyst-funded Lambda Energy has developed an innovative technology that enables high-frequency light (which is typically lost on PV panels) to be downshifted to lower frequency lightwaves. This change in frequency allows the otherwise wasted part of the spectrum to be better absorbed by the PV panels. This is done by passing the light through a medium that causes this Quantum Lightshifting.

Lambda Energy is considering different methods of application of this technology on panels. One appealing possibility is to apply this medium in the form of a film on the PV panels. This is important since the technology is only useful if simple and at-scale on the panels. There are many intermediaries and dependencies between the successful development of the technology and its widespread use by a PV panel manufacturer.

## Case study : Co-innovation & adoption chain risk

*Lambda Energy and their Quantum Lightshifting films to increase efficiency of PV panels*



**Co-Innovation Risk:** Lambda is waiting for an external company to commercialise an automatic film applicator. This significantly impacts the probability of delivering their innovation on time.

**Adoption Chain Risk:** While the PV panel manufacturer sees value in higher efficiency from their panels, they depend on suppliers. EVA supplier might not be happy with potential (chemical) interactions between their coating and Lambda's. Additionally, the manufacturer of robots that assemble the panels will need to innovate/adapt to Lambda's Lightshifting film challenges.



## Case study : Co-innovation & adoption chain risk

*Lambda Energy and their Quantum Lightshifting films to increase efficiency of PV panels*

Lambda is still at quite an early stage in the R&D of their technology. Therefore, their end customer is not fixed yet. This exercise helps them understand the possibilities and risks associated with different routes to market as they think of ways to address the identified market integration risks.

For instance, they could consider selling their tech to the glass manufacturer (which has larger revenues and ability to streamline partners) and let them lead on the integration, or partner with an EVA manufacturer to jointly develop a higher value proposition for the EVA coating.

## Case study : Co-innovation & adoption chain risk

### *ODQA Renewable Energy Technologies and their air-based Concentrated Solar Thermal Receivers*

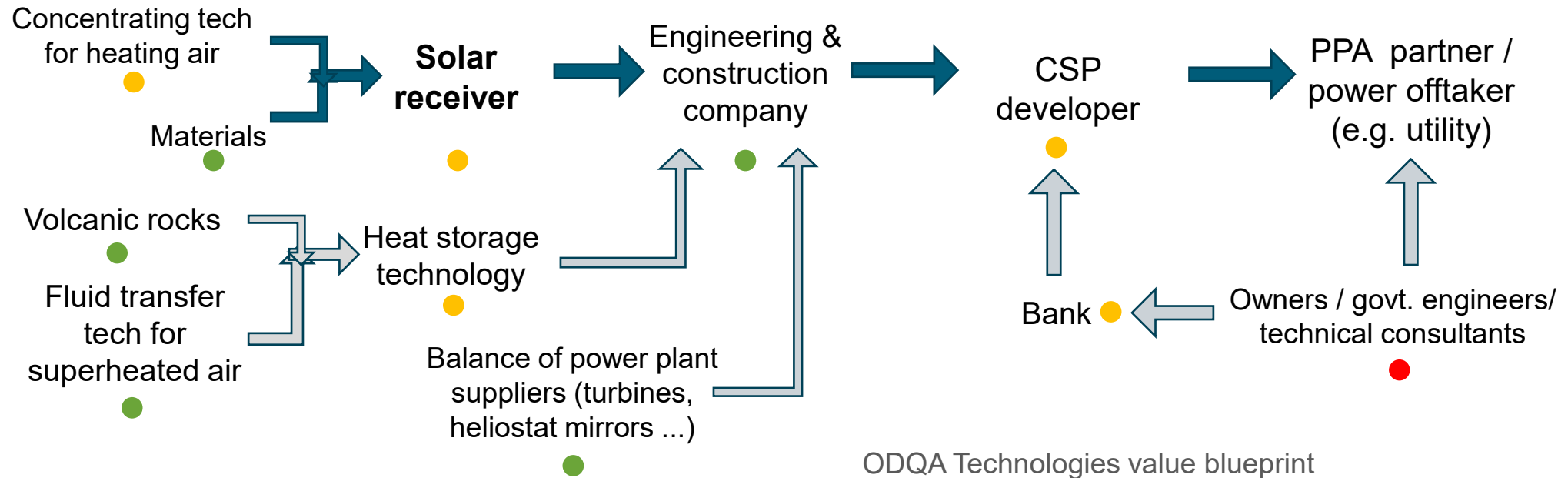
Energy Catalyst-funded ODQA Renewable Energy Technologies is developing a solar thermal collector that doesn't require conventional mediums such as molten salts or other liquids to transfer the heat. Instead, they are able to use air. This innovation reduces the cost of generated power as well as the O&M requirements.

However, this is a new and thus far untested technology at a commercial scale.

Their collector relies on other parts of the project development landscape, both technological and commercial, in order to be successful. Hence, they have a number of external ecosystem risks that should be highlighted and mitigated for the innovation to be successful. Mapping out their value blueprint can help with identifying such risks.

## Case study : adoption chain risk

### ODQA Renewable Energy Technologies and their air-based Concentrated Solar Thermal Receivers



**Co-Innovation Risk:** The alternative to molten salts storage is almost ready and will be faster than ODQA's own innovation.

**Adoption Chain Risk:** Some partners who will benefit from the low-cost alternative conventional CSP will still need project financing due to large project costs. The banks which fund these will be averse to new technologies, mainly due to their typically conservative lenders engineers. ODQA could consider engaging and educating potential engineering companies to de-risk their offering. Alternatively, developing better warranty structures with the construction company or partnering with Balance of System suppliers to provide the bank with security can help. Another option is to find a large developer who is forward-looking and consider offering technology exclusivity for certain geographic regions.

Other market entry angles to consider: energy security? environmental benefits? political impact? first mover advantage?

## Reflecting upon these concepts

### *Map out your ecosystem landscape*

- > Do you have an accurate value blueprint of your ecosystem mapped out?
- > Would everyone in your management team agree with it? How about someone with technical expertise in the market? Is it worth having everyone draw up one blueprint each to compare them?
- > How about the different stakeholders you have identified – do they see the landscape the same way you do? And do they agree with the risk assessment? Is it worth checking with them?
- > Could you adapt your product's value proposition to circumvent a market integration risk? Is that a reasonable approach, or should you try to solve the ecosystem challenges instead?

### **Suggestions:**

Spend some time with your team and partners to prepare your own value blueprint.

Make it a living document and refer back to it as your offering and partnerships evolve.

## Final note on responding to your value blueprint

### *Methods to improve your market ecosystem*

Ideally, your final value blueprint should be mostly green with very few yellows. But suppose your landscape has one or many reds or mainly yellows. In that case, it is important to reconsider your innovation strategy before investing too many of your precious resources in the existing ecosystem. There are many ways to respond to challenges in your value blueprint.

Techniques such as adding, removing, combining or relocating the different elements of the market ecosystem can help to see how the ecosystem looks and then create this change in the real world. Another useful approach is to choose a leader in your ecosystem to help iron out ecosystem challenges (as opposed to taking on the leadership role yourself). Leadership can be hard to let go of, but it also requires resilience, larger pockets and the ability to influence. Sometimes getting a larger player in the ecosystem to take on the leadership can pave the way for your innovation's success. This player can be the government, industry consortium, a supplier, intermediary or even the end customer!

One important concept that this research will discuss in more detail is the **Minimum Viable Ecosystem**.

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## 5. Scaling up within an innovation landscape

Start with your Minimum Viable  
Ecosystem - and add to it as you grow

# Sequencing stages of growth in your ecosystem

*Starting with the Minimum Viable Ecosystem (MVE) and scaling up*

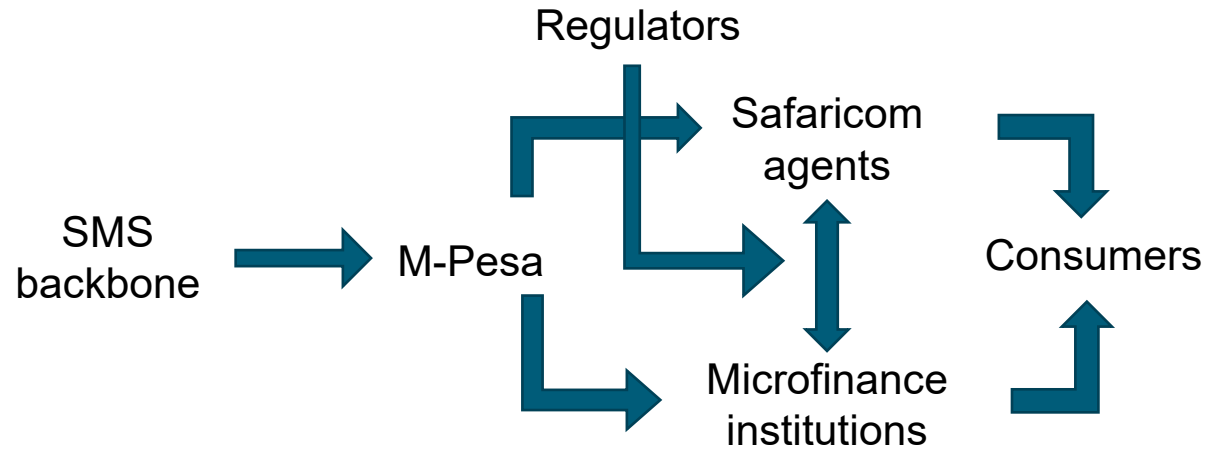
The Lean Startup concept of the Minimum Viable Product (MVP) is quite well-known. It is aimed at product prototyping and iterative proof of concept testing. The MVE is not about learning or testing. It is about deconstructing your value blueprint to its leanest form and bringing together the elements that can create commercial value now, allowing future addition of partners over time to reach the complete value blueprint. This is because the MVP approach works for stand-alone products to go from prototype to pilot to roll-out. However, for an innovation ecosystem, the market integrations must be built and cemented based on the MVE.

There are 3 principles to developing your ecosystem in this manner:

1. Create the MVE: extract the smallest configuration of elements from your value blueprint that can be brought together and create commercial value.
2. Staged expansion: add elements to the MVE that can fit into the existing system and increase the commercial value proposition with each addition.
3. Ecosystem carryover: leverage elements developed in the above ecosystem to construct a different ecosystem.

## A working example of the MVE

### *The market integration trajectory for M-Pesa*



The value blueprint of the initial (2005) M-Pesa pilot

M-Pesa (a joint venture between Vodafone and Safaricom) launched a pilot test of its mobile payment system by partnering with Faulu, a microfinance institution. The idea was that users could receive microloans from any Safaricom agent through an SMS PIN code.

Unfortunately, the initiative depended on collaboration between contradictory cultures of telecom (forward-thinking and rapidly growing) and banking (slow, conservative). It also relied heavily on regulators and treaded an unclear line between a money transfer service and a non-interest-bearing account entity. The problem was that the company was not formally regulated as a financial institution. Furthermore, Faulu wanted to retain its paper-based back-office operations with the now considerably more complex transactions. Hence the partnership was stuck in a quagmire of technological and process challenges, where the speed and scale required for mobile banking could never be adequately tested with a slow, conservative (but important) partner.

Microfinance institutions are a relevant partner, and hence it seemed like the right partner for a pilot. However, the ecosystem for this pilot was too complex and uncertain. M-Pesa needed to get to commercial scale with a simpler and more reliable ecosystem where they could focus on their value proposition.



## A working example of the MVE

### *A simplified MVE for M-Pesa*



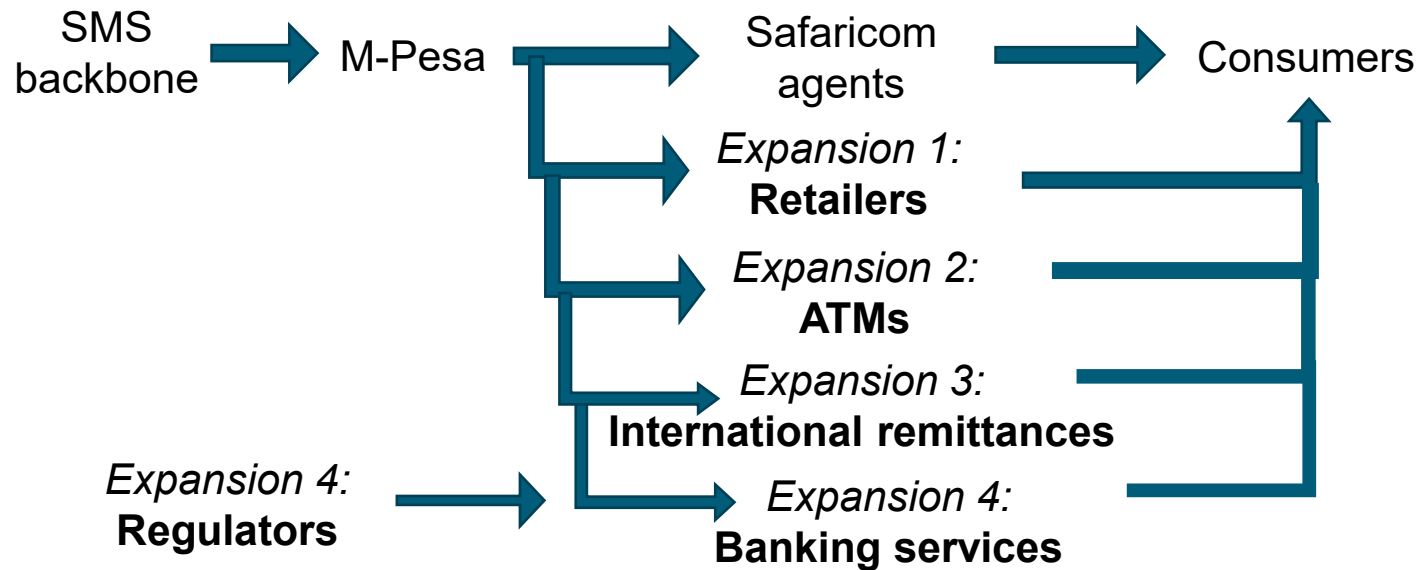
The Minimum Viable Ecosystem of M-Pesa's money transfer offer (2007)

Given the difficulties with its previous pilot, M-Pesa launched a new initiative focusing on its most basic elements and eliminating key coordination challenges with other institutions. To do this, it constructed the simplest ecosystem that would still create value while reducing externalities as much as possible.

It decided to focus on the money transfer service (as opposed to microcredits), which relied mostly on Safaricom who already had an extensive network of kiosks across Kenya. There were execution challenges, and the vast amounts of cash movements, mainly from cities to rural areas, required changes to the relationships and management of the agents. However, these were primarily internal dependencies. Since the relationship with Safaricom was strong, the technology was already established, and the demand was so large, the cost of change was easy to bear. Within a few months, over a million customers had signed up for the service.

## Example of staged expansion following the MVE

*Moving from the MVE to the final blueprint through staged expansion*



M-Pesa's MVE and subsequent stages of expansion

With the tremendous success of the initial MVE offering, M-Pesa began to add new partners to enhance its core offer. It brought new partners onto its platform.

Unlike with Faulu Kenya, the question of who should adjust to whom was resolved as M-Pesa now brought on partners under its terms. Within a year, they added retailers and utilities to buy goods and pay bills. Subsequently, they tied up with an ATM service provider to provide an ATM service instead of using agents. In 2009, they partnered with Western Union. Within two years of its launch, they had reached 7.3 million customers.

At this stage, they revisited their initial value proposition, and in 2010 finally partnered with a bank to offer banking services. Given their size and commercial success, past regulatory obstacles were now much easier to overcome.

## Further thoughts on the MVE

### Pilots vs footprints

There are two ways to move from a prototype to the full roll-out with increasing scale and value proposition levels:

- > For testing technology, this takes the pilot (demo install) route with roll-out phases 1,2,3..., depending on technological readiness levels.
- > Alternatively, the MVE footprint aims at achieving commercial scale early on, with a relatively small value proposition and expanding in stages 1,2,3... introducing increasing complexity in the ecosystem.

Rather than developing a great product and then looking for customers, the MVE approach builds a small and trusting pool of clients and expands the pool together with the product offering over time.

### Ecosystem carryover

The staged expansion of the ecosystem allows companies to move into newer markets or products using the success (and experience) of building one ecosystem and migrating into a new one. An example is early toymakers moving to comic books, then to movies and subsequently games, etc. This results from simply adding new partners and redesigning a new ecosystem based on the success of a previous one.

## Acknowledgement

This research was compiled through numerous interviews and inputs from:

Energy Catalyst-funded companies M-KOPA, ODQA Renewable Energy Technologies, Lambda Energy, as well as consortium delivery partners IntelCap and New Energy Nexus. Thank you to everyone for sharing your expertise and feedback.

## Further Reading

The bulk of this research, including examples and theory, was derived from the author Ron Adner, a specialist on market integration risks. The links below comprise a round-up of his major papers, books, videos and lectures on this topic.

<https://hbr.org/2016/11/right-tech-wrong-time>

<https://www.ft.com/content/b438457a-7ca8-11e1-9d8f-00144feab49a#axzz1r5dHBIRW>

<https://www.fastcompany.com/1669122/the-innovators-blindspot-even-your-best-ideas-will-fail-if-your-partners-dont-innovate-too>

<https://inform.tmforum.org/insights/2018/09/minimumviable-ecosystem-mve-key-milestone-initial-problem-scalable-solution/>

<https://www.youtube.com/watch?v=3sIOXTUr4Hw> <https://thewidensbook.com/videos.html>

<https://hbr.org/2006/04/match-your-innovation-strategy-to-your-innovation-ecosystem>

<https://www.cnbc.com/id/46594077>

<https://www.bcg.com/publications/2020/how-do-you-design-a-business-ecosystem>

<https://sol.sbc.org.br/index.php/sbsi/article/download/5847/5745>