

CLUSTER BUSINESS MODELS

Exploring Business Models in
Global Innovation Clusters

A REPORT BY STRATEGY TOOLS & THE GLOBAL COMMUNITY
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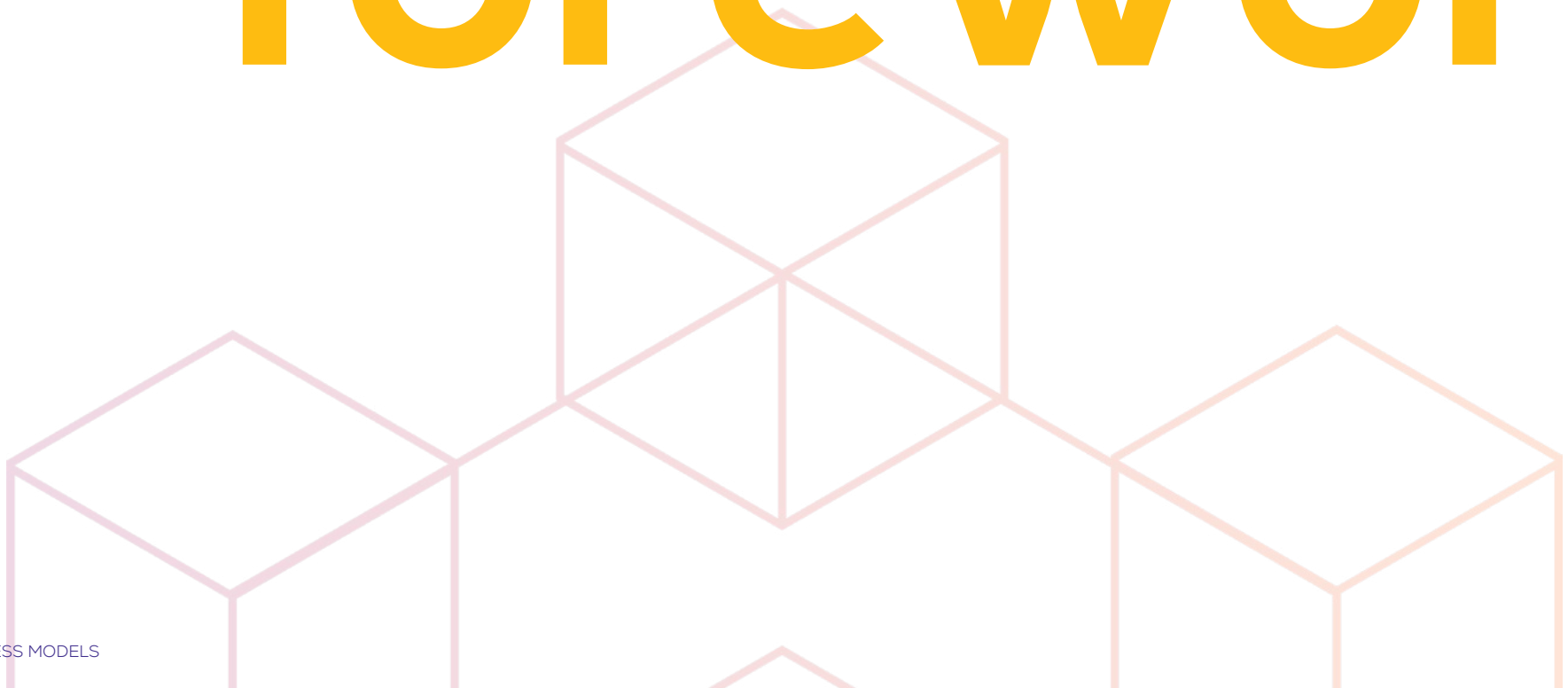
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foreword



CLUSTER:

FUNDING ROUND:

YEAR:

FINANCING



PRIVATE INDUSTRY

- Founding Partners
- Membership fee
- Programs
- Events & conferences
- Capital raise %
- Venture fund
- Rent (office space, lab space)
- Reports & analysis
- Other



PUBLIC FINANCING

- National Cluster Program
- National government
- National financing programs
- Regional government
- Regional financing programs
- Local government
- Local financing programs
- Other



PROJECT FINANCING

- Industry project financing
- Public project financing
- Other

OTHER

AMOUNT

COST



START UP COSTS (ONE-TIME)

- Advisory services
- Strategy development
- Design & branding
- Communications
- Other



CLUSTER STAFF (FULL-TIME, PART-TIME)

- CEO
- Full-time staff
- Part-time staff
- Board compensation
- Other



CLUSTER OPERATIONS

- Office rent
- Venue rent
- IT infrastructure
- Marketing & Communications
- Travel & lodging
- Programs
- Consulting services
- Other



CLUSTER PROJECTS

- Cluster collaboration projects
- Innovation group projects
- Member-led projects
- Other

AMOUNT



Cluster Financing Model



Get yours at www.strategytools.io
 Cluster Financing Model by Christian Rangen is the intellectual property of Strategy Tools and is at your disposal under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

A proactive cluster board is core to every innovation cluster. Such a proactive board should have a clear view on strategy, business model and value impact for the cluster.

Yet, in most innovation clusters, the board is not able to rise to the occasion. In my work with Innovation Clusters, both in Norway and globally, I often see boards struggle to step into their ‘strategic role’. As a consequence, the cluster CEO struggles to design and deliver on the cluster’s strategy and roadmap. The paradox here is that cluster boards tend to have highly experienced business leaders, often with extensive experience from private sector companies and public organizations.

Yet, clusters are different. In my work, I often find that these boards are lacking a common foundation, a shared language and a common understanding of what is a cluster strategy, what is a cluster business model and what is the cluster’s value impact.

Over the past few years, I have had the chance to work with, design and implement a long series of visual strategy tools for innovation clusters. Working inside the board room, running hundreds of hours of board strategy sessions, I have seen firsthand the power of working visually on strategy.

Yet, cluster business models have shrouded in fog for many boards – until now. During the past few months, I have had the opportunity to test out some of the latest tools on cluster business models – with great success. With this report, I am excited to see Victor and Chris continue to push our shared understanding of business models in clusters. My conversations with Chris go way back on this topic. With this report, I hope we can all take some big steps forward in our shared understanding of cluster business models around the world, in the process helping cluster boards create more value and creating better clusters for the future.



Kristianne Paasche,
Special Advisor
Norwegian Innovation Cluster Program

I am pretty sure I won't get too many chances in life to write a foreword to a publication, and thus I jumped to the opportunity. Little did I know what a bumpy ride we had in front of us. As we started out on this adventure, we did not know what to expect and the impact we would be able to make by addressing this issue.

Since January 2020, Christian and I have been exchanging thoughts and ideas on this subject of business models for clusters. Christian, being the guy that he is, said; Let's write a report about it. Thank you again for pushing and just going for that area outside of the comfort zone.

Because that is where the magic happens and we hope to push you as a reader as well a little outside your comfort zone. Looking for a little magic that you might need in developing this cluster, ecosystem, innovation park or supercluster you are working on.

We hope this report will help you in these efforts. We have written it with the help of a lot of other authors because we experience we are not the only ones looking for this information and knowledge. So we are happy to be able to share with you our learning so far and looking forward to continue the conversation, both on- and offline.

In the meantime, we hope that you will keep sending in your challenges, ideas, use cases and or general remarks on the subject.

We feel we have only just started this journey together with you. Volume II is already in the works....



Victor Haze
International Ecosystems Director
Health Valley, The Netherlands



**why we
wrote this**

A stylized illustration of a person standing on the edge of a large, reddish-brown cliff. The person is silhouetted against a bright yellow background and is looking out over a vast, abstract landscape of rolling hills and valleys in various shades of red, orange, and yellow. The overall scene conveys a sense of exploration and discovery.

exploring cluster business models

In 2014 I started working as an Innovation Manager for Health Valley. Little knowledge on the subject of clusters, economic development or regional policy instruments existed.

There is a handwritten drawing doodle of the 'ecosystem' I found myself in. I sketched this to get perspective, to try to understand what I was trying to do, to find the pieces of the puzzle that I landed myself in.

When I showed this picture six years later to Christian, he replied; Ooh, a first analog MIRO board!

Why are we writing this? This report on cluster business models is a way of making sense. It is our way of trying to find the pieces to the puzzle. In all the talks and conversations, we have had over these last couple of months found that to be a mutual challenge; what are cluster business models and how can we design better ones?

How might we build better relationships in a cluster to drive economic development? Growth? Jobs created? New products and service innovation?

We know we are not the only ones looking for these answers. We hope that by publishing this report with use cases from early pioneers, it will give you a sense of belonging. Belonging to a community of like-minded people that look for solutions.

We hope this report is the beginning of some of the answers we are all looking for.



Victor Haze
International Ecosystems Director
Health Valley, The Netherlands

“We need to develop our business model”

The first time I heard the phrase, in a cluster board meeting, I was struck by how little we – collectively – knew about the topic. While it may seem easy, we can just apply any other business model framework, the reality is that clusters are uniquely structured organizations – and need an equally unique business model framework. Of course, we did not know this back then. But, in the conversations that followed, often sparked by Kristianne Paasche and my dear friends at the Norwegian Innovation Cluster Program, we kept coming back to the topic of cluster business models. At times, it felt like we were going in circles. At times, backwards. Yet, a curiosity drove us, a belief drove us.

In my work with clusters all around the world, the topic of cluster strategy has been relatively easy. We have great visual tools for that, we know how to engage the cluster ecosystem and shape a future-fit strategy. Yet, when it came to business models, we never really had the same depth of tools and methodologies to bring to the table – until now.

This past summer, in a cluster project in Canada, the need for better understanding of cluster business models became very apparent. Working with the project team in Pacific Canada, we broke through and managed to truly design and test the missing pieces in our work.

With this report, we want to both summarize and share our work so far. While we have made some progress, my feeling is that we are still just scratching the surface in terms of our collective understanding of cluster business models. Hence, I hope this report can contribute to a larger and wider discussion, as we all continue exploring cluster business models.



Christian Rangen
Global Cluster Expert
Strategy Tools & Engage // Innovate



**our
aspirations**

With this report, we hope to...



Drive a global conversation on cluster business model innovation.



Explore current practices of cluster business model development.



Develop – and share – a robust strategy toolkit to develop better cluster strategy and cluster business models.



Contribute to the global community on cluster business models.



Kickstart a wave of cluster business model innovation projects, ideas and change-makers around the world.

thank you

We would like to express our thanks to three groups of people that have greatly inspired us and shaped our thinking on this journey.

Kristianne Paasche and the superb team at the Norwegian Innovation Cluster Program were crucial in shaping the early conversations on cluster business models. These early conversations, going back years, were the first seeds for the tools and thinking you will find in this report.

While our experience with business models goes back since 2006, it was really in 2009, when one of us (Chris) first came across the book, *Business Model Generation*, by Alex Osterwalder and Yves Pigneur, that he got seriously interested in the topic of business model innovation. Alex's and Yves' work has been a huge source of learning and inspiration over the years.

European Cluster Manager of the year, Bianca Dragomir, being a living business model innovator herself, has been a great source of inspiration. Her work on starting a cluster business model revolution is just beginning and we look forward to following her work in the years ahead. Europe surely need more business model innovators like Bianca.

Combined, these three groups have been hugely important to shaping our thinking and we would like to extend our warmest thank you to them all.

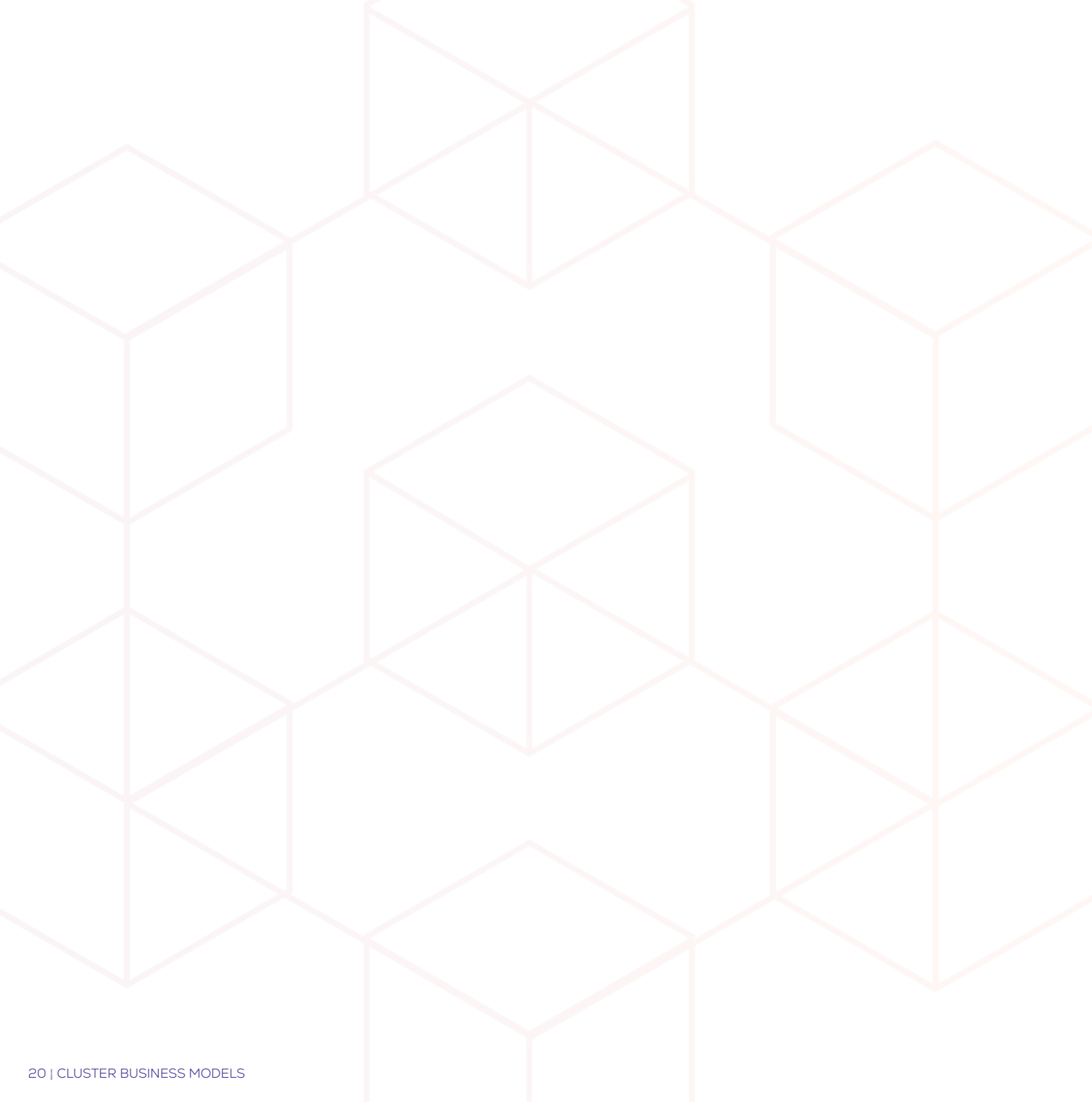
The final thank you goes out to the global cluster community, notably the active Global Cluster Leadership Community.

Through developing and running this program, we have gotten a chance to meet, learn with and collaborate with global cluster leaders. Mexico, Dubai, Denmark, Canada, Australia, Germany, Ireland, Spain, US, Ukraine and Norway – these are just some of the countries represented in the live monthly workshops.

Leaders like Claire, Andrew, Alto, Andro, Javier, Roberto, Ásta, Kendra, Tanja, Stig, Owe are just some of the leaders that have challenged and inspired our thinking; many of whom are also sharing their stories here in this report.

Collectively, this community has sparked our thinking, challenged early ideas and fueled our curiosity in better understanding, mapping, developing, designing and building cluster business models.

You are the group we write this report for. Thank you.



Who
this
report
is for



BOARD MEMBERS

Board members of innovation clusters will benefit from an overarching view on cluster business models and strategy.

This will help equip boards for better strategy discussions, better business model discussions and – ultimately – building better innovation clusters.



CHIEF FINANCIAL OFFICERS

The cluster CFO is rarely able to take on a true strategic role. That should change.

We aspire to see more strategic, high-impact cluster finance leaders. We believe this report and the toolkit can assist in that mission. CFOs can use the tools to create both understanding, clarity and alignment around new, innovate cluster business models.



CEOs

Cluster CEOs are often tasked with developing the strategy, budget, financing and cluster business models. We often say this role requires “superhuman leadership skills”.

Cluster CEOs will now have a report and a toolkit to help design and implement better cluster business models.



COMMUNICATIONS MANAGERS

Clusters, more than most organizations, live on strong communications. With a wide variety of stakeholders, the communications job is often challenging.

Now, communications managers can use a simple, visual language to create clarity and understanding around the evolving cluster business models. That’s something to communicate!



NATIONAL & REGIONAL CLUSTER PROGRAMS

National or regional cluster programs play a crucial role in managing and shaping cluster business models. Through their role as financing body, expert advisor or simply a genuine partner, national and regional cluster programs can greatly drive the implementation of new innovative cluster business models in practice.



NATIONAL GOVERNMENTS

National governments play a key role in any cluster initiatives. In Asia, we have worked with Secretary Generals in Ministries of Finance. In Norway, the Ministry of Trade, Industry and Fisheries collaborate with the Ministry of Finance on cluster policies and financing. Surely, they would benefit from a deeper understanding of cluster business models.



CONSULTANTS

Consultants and advisors to clusters around the world can pick up this report and the toolkit, and instantly put it to use with their cluster clients and projects.

We hope, in years to come, to hear many stories of cluster advisors creating impact on cluster business models, helping design innovative models the world of clusters have yet to see.



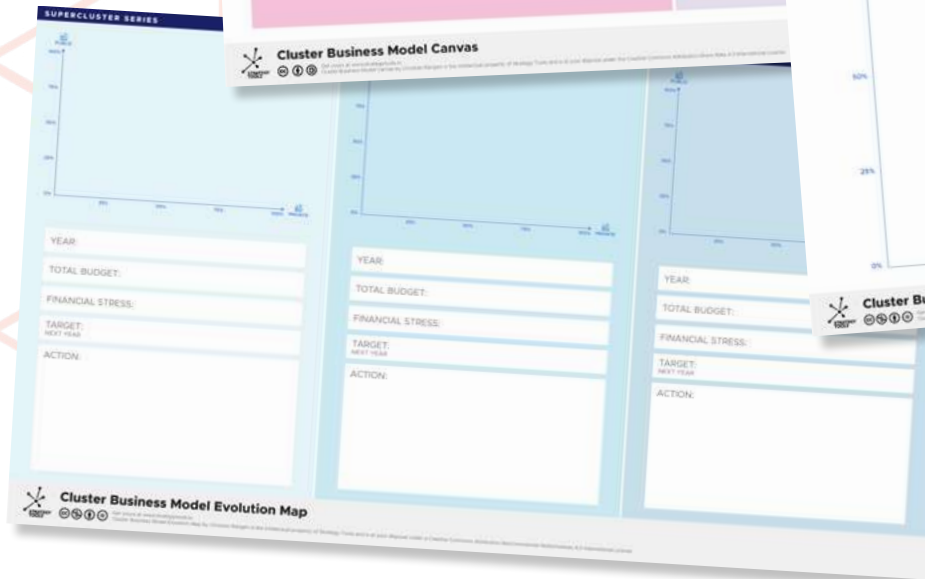
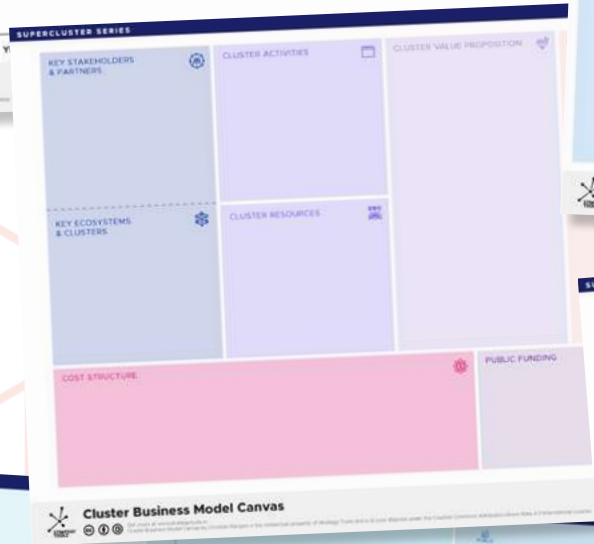
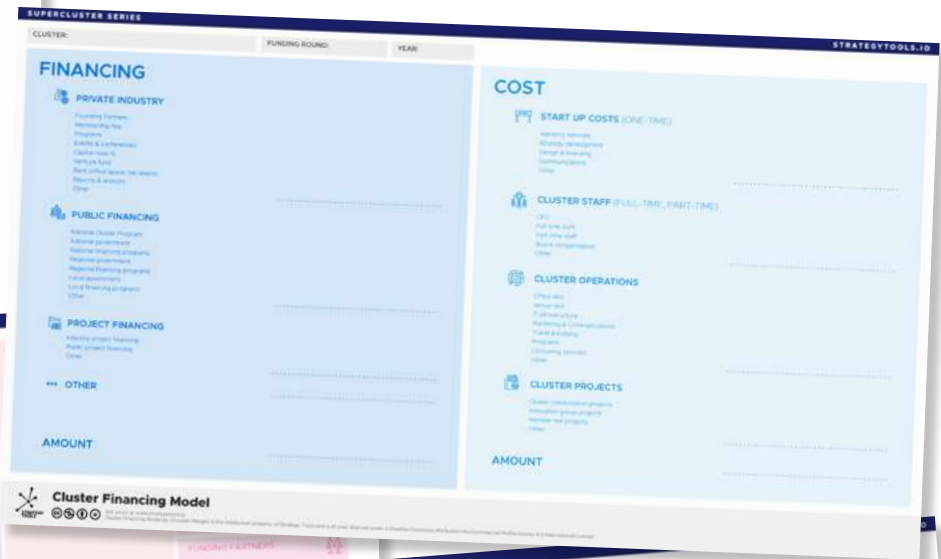
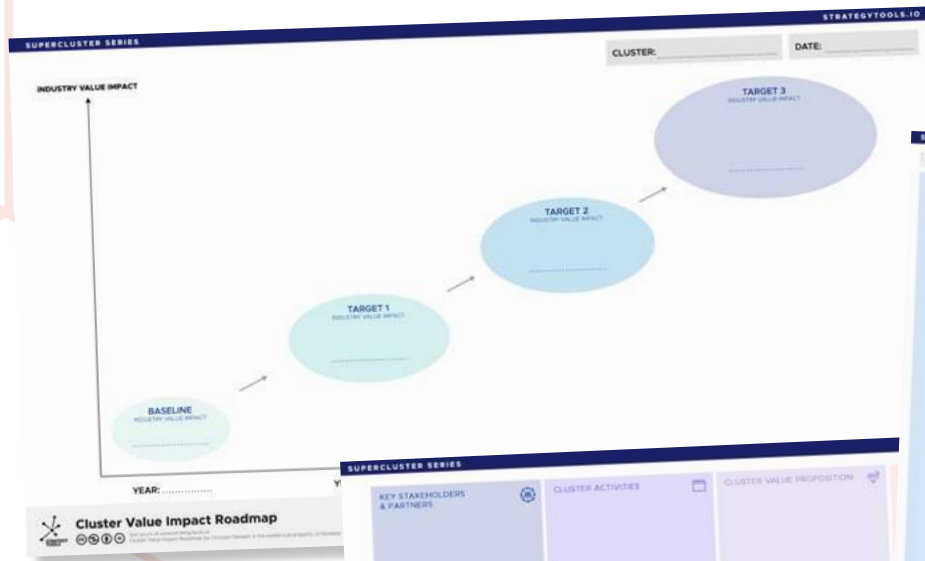
BUSINESS SCHOOL FACULTY

Innovation clusters and Superclusters are rarely taught in higher education. This is unfortunate.

We hope this report and toolkit can inspire faculty in strategy, economic development, public policies and entrepreneurial ecosystems to bring cluster business models onto the curriculum and into the classroom.



toolkit



what you get

Readers of this report get access to five cluster business model canvases. These canvases can be downloaded and freely used.

DOWNLOAD NOW



part of the Supercluster toolkit

The five tools featured in this report are a small part of the Supercluster Series. This is a series of 55 visual strategy and innovation tools, designed and developed exclusively for innovation clusters, cluster leaders and cluster programs around the world.

These tools have been formative in shaping national cluster programs in Europe, Asia and the Americas. They have helped cluster boards develop the right strategy. They have helped cluster leaders develop startup portfolios, capital strategies and win international projects.

Most importantly, the large majority of these tools are free and open for anyone to download and use in their cluster development work around the world at www.strategytools.io.



part one: introduction



**In Iceland,
most clusters
are 100%
privately-funded.**



1.1 innovation clusters, strategy & business models

For decades innovation clusters have been to go-to solution for governments, regions, entrepreneurial networks in order to seek economic growth, job creation and prosperity.

In the wake of recent developments during the pandemic, technology advancements, market upturns we feel a paradigm shift is emerging.

The traditional triple helix contract of governments, educational institutions and SMEs is no longer the most logical answer to these questions.

Since the start of the Global Cluster Leadership program at Strategy Tools we have been discussing what is the next logical step. We think it is in a fundamental change to a pentagon model of the Supercluster as we call it. But how to get there? What will be your first steps? Your strategy and most importantly your Business Model(s)? All these questions are relevant and we have been looking for answers within our global community of partners, consultants and strategists.

We are presenting case studies of different countries, areas, industries and models in order to discover possible ways for you to what you need, and what could work for you.

This is written in the midst of a sociological and economically very interesting time. It poses enormous challenges but also a great deal of opportunity.

We hope to look into this more deeply with you, as partners, as collaborators. We hope it will lead to a lot of new discussion and discovery. This is merely a starting point in looking for strategic ways to change business models for innovation clusters.

1.2

what is a cluster?

There is an extensive body of literature and research on clusters as both social phenomena and on-purpose-designed organizations.

In our work, we define clusters with six parameters:



**Trust-based
Collaboration
Platforms**



**Public-Private
Partnership**



Magnets



**Collaboration
Networks**



**Problem
Solver**



**Economic
Engine**

Beyond that, we always look at Type of Clusters and Categories of Clusters

TYPES OF CLUSTERS:



**Emerging
Cluster**



**Growth
Cluster**



Supercluster

Don't forget the 'baby cluster'.

Sometimes we also introduce the concept of 'baby cluster', or early business networks that have yet to develop into a fully-functioning cluster. It's still just too early.

CATEGORIES OF CLUSTERS:



Grow



Transform



Build

Finally, we also define the three categories of a cluster. This refers to the focus of the cluster and its members. Are we growing an existing industry? Are we transforming an existing industry? Or are we building an entirely new industry? This may not always be apparent but it is critical to the cluster's long-term success and impact.

what
is a
cluster?



Engines

of economic growth,
by connecting 100s of members
and partners



Collaboration networks

built around the
industries of the future



Solving **industry-level challenges**
and opportunities



Private-public **partnerships**,
developed by design



Trust-based

collaboration platforms



Magnets that attract
talent, capital, researchers,
and companies

six clusters around the world

On the following page, we have selected six clusters around the world as examples. These six represent different industries, different sectors, with different business models and value impact roadmaps; yet they all fit perfectly into our definition of clusters.





Queensland Robotics Cluster
Queensland, Australia

Developing Australia's robotics industry.



Maritime Blue
Seattle, WA, USA

Developing Washington State's ocean economy.



Bloom: Barbados Cleantech Cluster
Bridgetown, Barbados

Developing Barbados' sustainable energy and climate technology opportunities.



Energy Cluster Denmark
Esbjerg, Denmark

Making Denmark a green leading nation for innovative and global energy solutions.



ÍSLENSKI
FERÐAKLASINN
Iceland Tourism Cluster

Iceland Tourism Cluster
Reykjavik, Iceland

Developing Iceland's tourism industry.

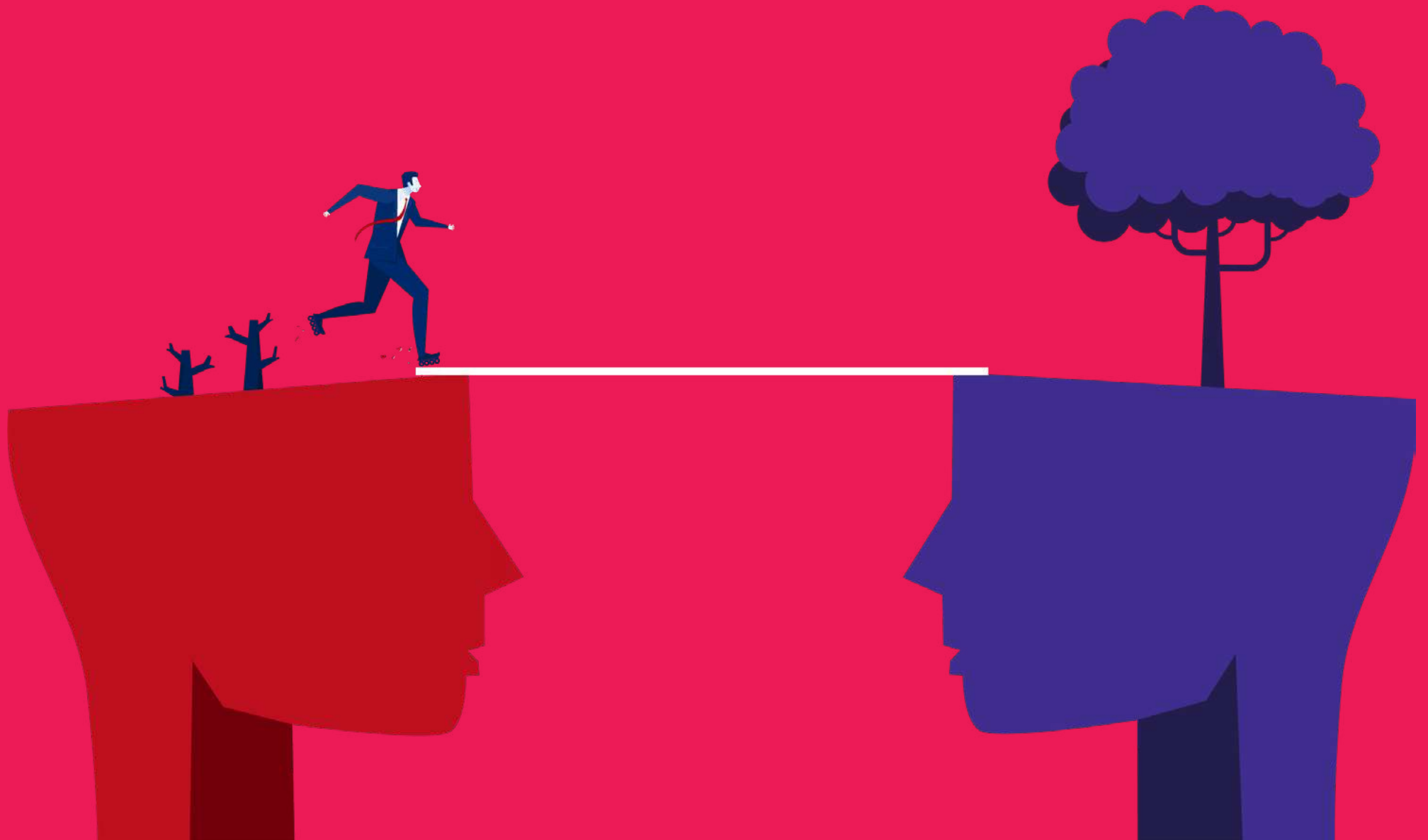


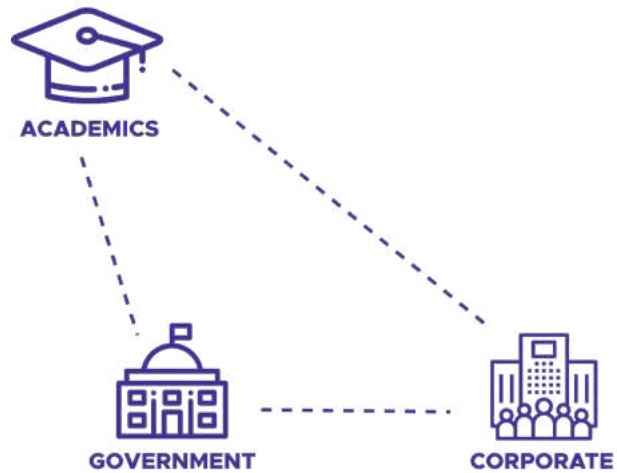
**OCEAN
AUTONOMY
CLUSTER**

Ocean Autonomy Cluster
Trondheim, Norway

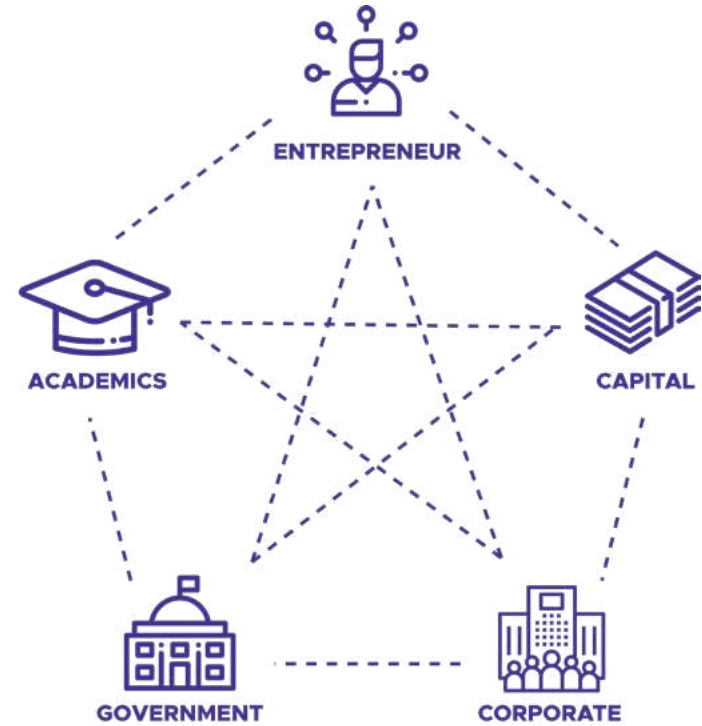
Developing Norway into the leading global country in ocean autonomy solutions.

a new
paradigm
in the world
of clusters





Triple Helix
1990's – 2010's



Pentagon
2010's –

A new paradigm in the world of clusters

Most clusters and cluster programs around the world are traditionally based on the Triple Helix framework.

The underlying theoretical framework of the cluster was getting Industry, Academia and Government to collaborate better.

That paradigm is rapidly getting outdated.

Since the early 2010's, a growing number of clusters and cluster programs have been upgrading and expanding their theoretical frameworks to include Capital and Entrepreneurs.

Today, any cluster needs to update its foundation to better include, involve, activate and serve startups, scale ups, accelerators, incubators, business angels, venture firms and large investment companies.

Welcome to the new cluster paradigm.

1.3

what is strategy in a cluster?

Where are we going – and how are we going to get there?

At its core, strategy is simple.

It should cover where we are going (vision, mission, ambition, desired position)

– and how we are going to get there (the focus areas, strategic pillars and roadmap).

For a cluster, a clear cluster strategy should cover the following areas:



AMBITION

What is our mission and ambition?



FOCUS AREAS

What are our strategic pillars?
(we often recommend five)



VALUE IMPACT

What is the value we aim to create or the impact we aim to have?



ROADMAP

What does our strategy roadmap and timeline look like?



1.4

**what is business model
in a cluster?**

level 3

how a cluster creates value impact

The third level is how a cluster is able to organize and align itself around the shared value creation or, what we call, value impact. This goes beyond the funding/cost discussion and requires the cluster to focus and measure outcomes and value creation.

For many, this is a difficult exercise. Many clusters, we find, tend to measure the easy things (number of members, number of events, how many people have joined a webinar). Few are truly adept at measuring the outcome of the cluster. Granted, this can be exceedingly hard, but it is possible. (hint, see 1.6, in a few pages)

level 2

the cost structure of a cluster

The second level is the cost structure of the cluster. What do we need and how should we best structure it. For many, it is often beneficial to start with the cost side, and really dig into how to best structure the cost of the initiative.

Often, we find there are creative ways to manage costs, through talent sharing, internships, co-locating with founding partners and generally keeping costs lean, low and flexible.

level 1

how a cluster is financed

The first level of cluster business model is the financing side. We have identified three common financing mechanisms, Public-Private-Project.

For many clusters, the quest for financing can take a significant part of their focus and energy, preventing them from focusing on the value creation or output of the cluster. Initially, most clusters struggle, getting by on 'scrappy financing' solutions.

1.5 why cluster business models matter

Globally, there are some 7,000 innovation clusters. In the EU alone, there are 3,000.

The large majority of these clusters are small, understaffed and underfunded. They are resource-challenged, and consequently, their value impact is limited.

We believe that innovation clusters and Superclusters worldwide would greatly benefit from learning about, understanding and shaping better business models.

At its core, the business model of a cluster is how it creates value. Yet, many clusters never get there.

Instead, they get pulled in all kinds of different directions, trying to serve and please members and being busy rather than strategic.

In our work with clusters and business models over the past five years, we have rarely met a cluster that has had a clear business model. Instead, some have financing (mostly public), some have financing (mostly private), some have budgets, some have project financing, some have KPIs and metrics; but few could really pass the test of a highly developed, fully validated, sustainable cluster business model.

We believe this needs to change. We believe the next decade will need to shine a light on, build capabilities and mastery around winning on cluster business models. The question, as we shall explore in the coming pages, is 'how?'

But first, we will give you a direct shortcut over the next two pages, with the Cluster Value Impact.

1.6

what is your "cluster value impact"?

One of us (Chris) has worked with nearly a hundred clusters around the world, frequently asking, 'what is your value impact?', or more precisely, 'what is going to be your value impact?'

Few can answer.
(we know, it is super hard)

The understanding around cluster impact and cluster value impact is only just starting to emerge. In many leading clusters we hear ambition statements like *“making Norway the number one country in the world for autonomous ocean solutions”* (we like that one). But still, not quite a value impact statement.

If we were to build on that, we could, for example say, *“our cluster aims to produce 1,000 new jobs, 25 new companies and 3 cool startups, all in the ocean autonomy space.”*

Now, that may not be very ambitious, and it would be pointing more to the 'end outcome' or the value outcome of the cluster's work.

Let's try again.

A little bit longer statement, again in the ocean autonomy space, could read something like this:

“Currently, the Norwegian autonomous ocean sector has 35 companies, employing 8.000 people combined, with Kongsberg Maritime leading with 4,500 employees. It is considered a very nascent sector, with an annual revenue around €10M for Norwegian companies.

Over the coming three decades, we predict this sector to grow, globally, with an annual factor of 3X.

Looking into 2050, we believe that the global ocean autonomy sector will count well over 25,000 companies, employing 450,000 people, most of whom will be data scientists and programmers. The sector may well have a combined market value of around €1-5 trillion.

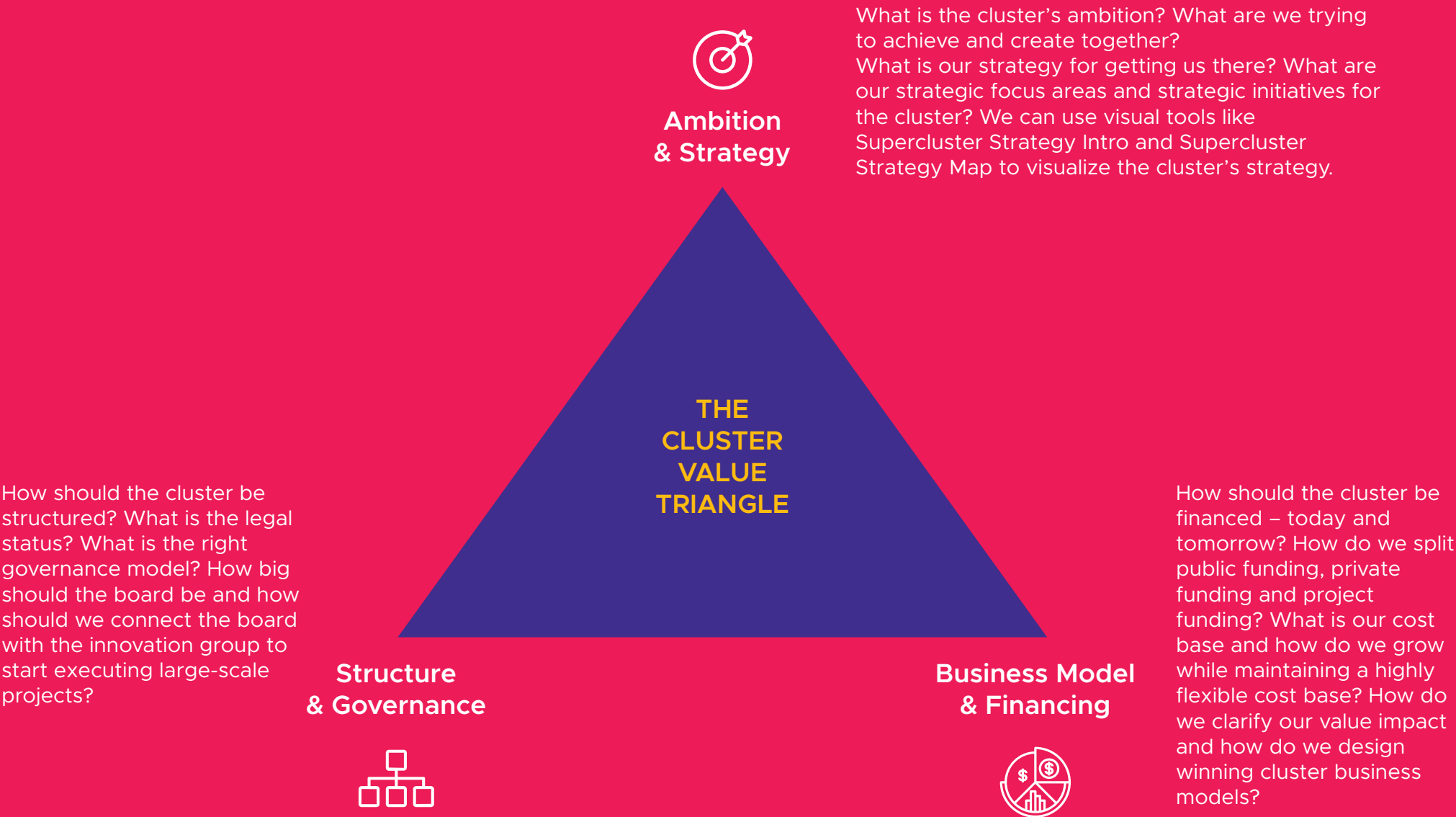
The role of the cluster is to make sure that our members outpace that growth and capture the best market opportunities globally in this rapidly emerging market. The cluster expects to have the following value impact in the coming decades:

*2021: €10M revenue (Norwegian companies) , 5% global market share
2030: €350M revenue (Norwegian companies), 12% global market share
2040: €40BN revenue (Norwegian companies) , 14% global market share
2050: €500BN revenue (Norwegian companies) , 22 % global market share*

That would be value impact.

1.7 the cluster value triangle

The Cluster Value Triangle is a strategy framework that allows us to bring the key elements of strategy, structure and business model together in one integrated framework. The Cluster Value Triangle is often used with cluster boards, cluster management teams to connect these pieces into a single solution.



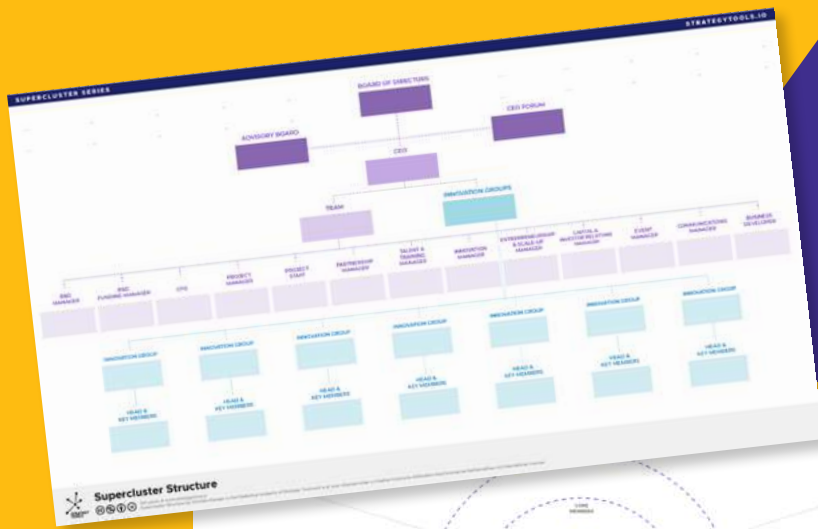
SUPERCLUSTER SERIES STRATEGYTOOLS.ID

AMBITIONS
(What is our Ambition, Vision, Mission and purpose?)

SUPERCLUSTER FOCUS AREA 1	SUPERCLUSTER FOCUS AREA 2	SUPERCLUSTER FOCUS AREA 3	SUPERCLUSTER FOCUS AREA 4	SUPERCLUSTER FOCUS AREA 5
TARGETS	TARGETS	TARGETS	TARGETS	TARGETS
YEAR 1	YEAR 1	YEAR 1	YEAR 1	YEAR 1
YEAR 2	YEAR 2	YEAR 2	YEAR 2	YEAR 2
YEAR 3	YEAR 3	YEAR 3	YEAR 3	YEAR 3

Supercluster Strategy Intro

THE CLUSTER TRIANGLE



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Cluster Business Model Canvas

Key Stakeholders & Partners, Cluster Activities, Cluster Value Proposition, Revenue Model, Key Capabilities, Key Resources & Capabilities, Cluster Resources, Key Channels & Customers, Public Financing, Private Financing, Project Financing, Key Partnerships, Cluster Business Model Canvas

SUPERCLUSTER SERIES STRATEGYTOOLS.ID

Cluster Financing Model

FINANCING: PRIVATE FINANCING, PUBLIC FINANCING, PROJECT FINANCING, OTHER

COST: START UP COSTS (ONE TIME), CLUSTER STAFF (FULL TIME, PART TIME), CLUSTER OPERATIONS, CLUSTER PROJECTS

AMOUNT

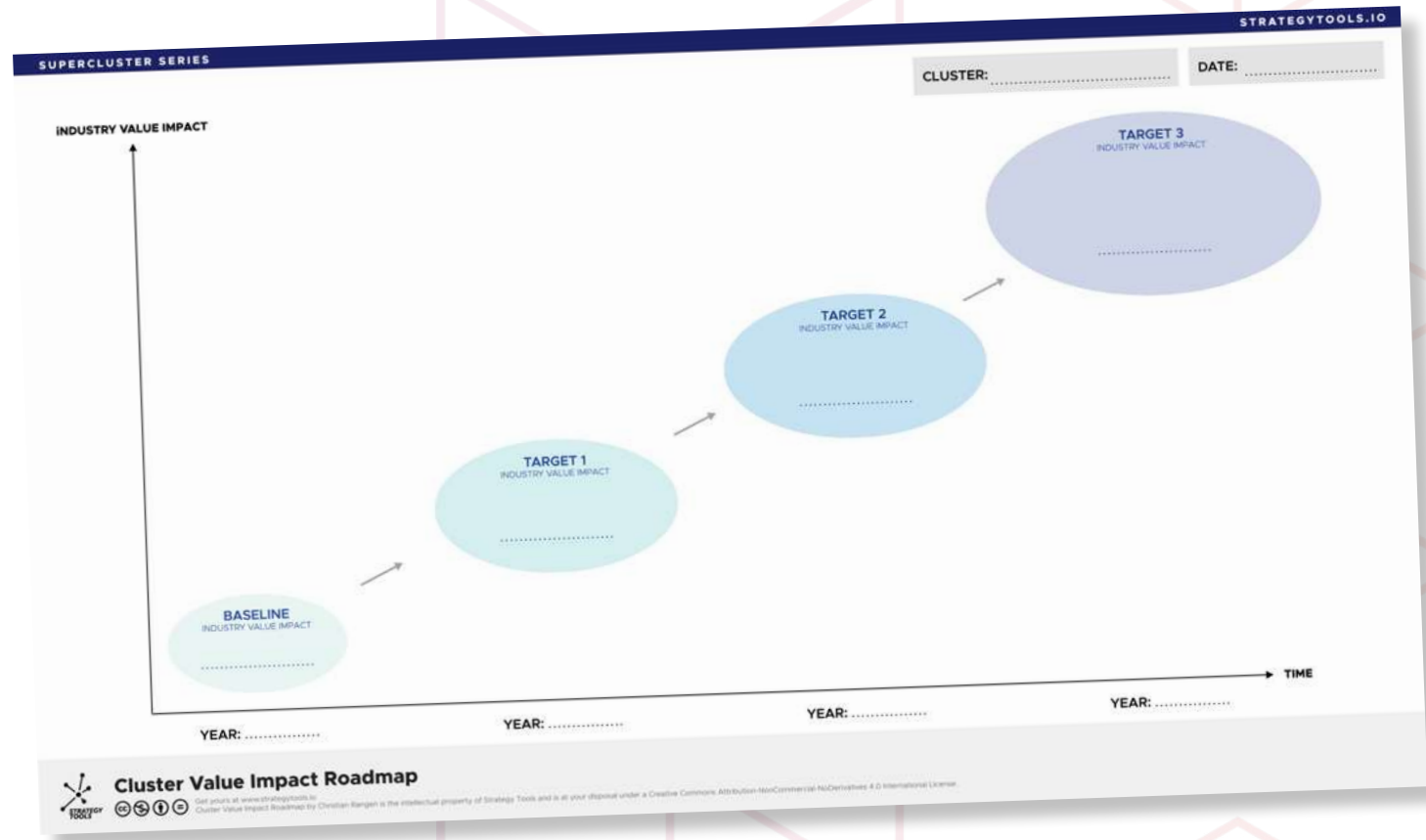
The Cluster Triangle represents the input pieces.

Next, the Cluster Value Impact Roadmap represents the outcome, or impact to be created.

Often spaced over four time-periods (year 0, year 10, year 20, year 30); most clusters would always want to and need to take a long view on the cluster's outcome or impact.

Every cluster would set its own, unique targets. The important thing is that these targets are commonly available, easily understood and can be tracked and measured over time.

The canvas, Cluster Value Impact Roadmap, developed in close collaboration with the Norwegian National Cluster Program, is the ideal tool for the job.



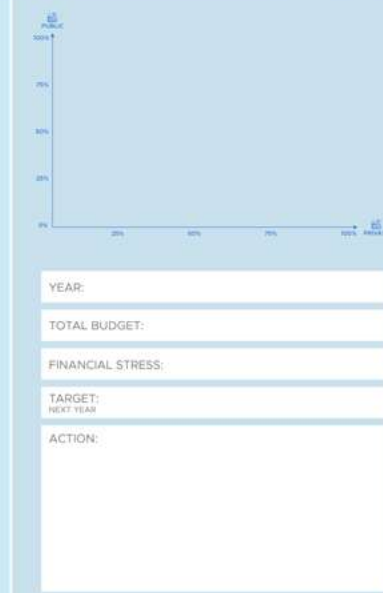


part two:
tools for cluster
business model
development

**In the Middle East,
many governments
are looking into clusters
to accelerate national
transformation**







Cluster Business Model Evolution Map

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Cluster Business Model Evolution Map by Christof Rangan is the intellectual property of Strategy Tools and is all year licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License

The Power of Visual Tools

One of the most dominant challenges for cluster managers is to get everybody on the same page.

If you are used to working with multidisciplinary teams in a hands on session you may have come across the phenomenon of ‘YMMV’, Your Mileage May Vary’. People have different backgrounds, different experiences, different education etc. Different mindsets.

If any strategy session is to work out successfully, it is the facilitator that can make this happen. Bringing in results that matter by making sure everyone understands what is required.

We have found in many of the workshops that we have done that a visual toolset is one of the keys to your success.

It will present the same image to everyone. It will create a common language for all participants. These tools can be used in the room, or in 100% digital and remote sessions.

Over the following pages we will introduce you to five such tools, all designed to help you build better cluster business models.



entry level

cluster business model map

The Cluster Business Model Map is an entry-level tool to visualize the most basic building blocks for a cluster business models, the public vs. private funding. This tool is overly simplistic as it does not account for project financing as a separate financing sort, but blends it into the two main categories.

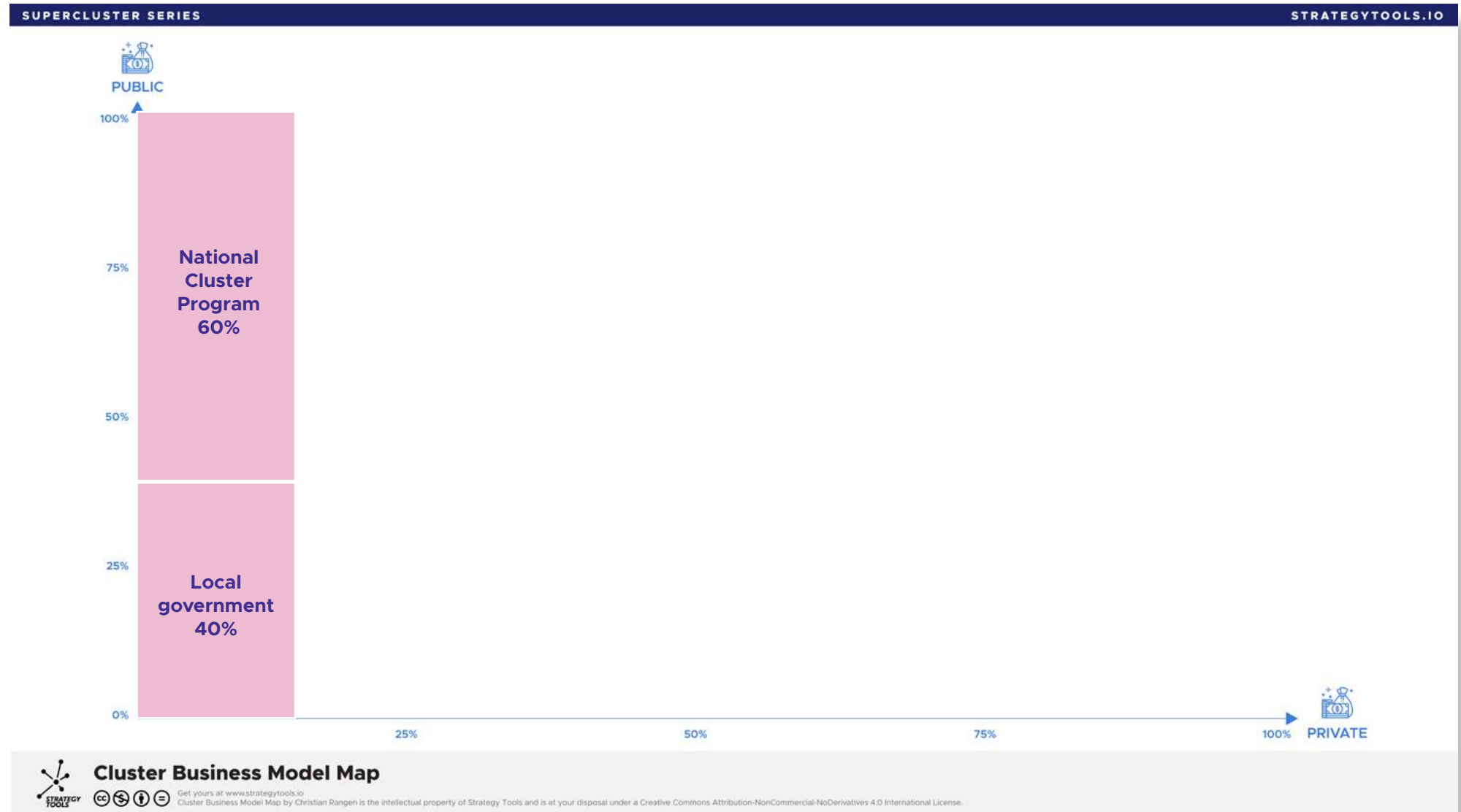
For people new to cluster business models, this is a great starting point as it allows a quick visualization of the axis Public vs. Private financing. For many cluster leaders, even this is a great starting point to a larger more complex conversation.

A fully publicly-financed cluster program

In this entry-level example we see the cluster receiving 40% financing from the local government, typically at municipality level and another 60% from the national cluster program.

This is a standard opening for clusters in certain countries.

It would be beneficial to shift towards more 'industry led', private financing as soon as possible.



intermediate level

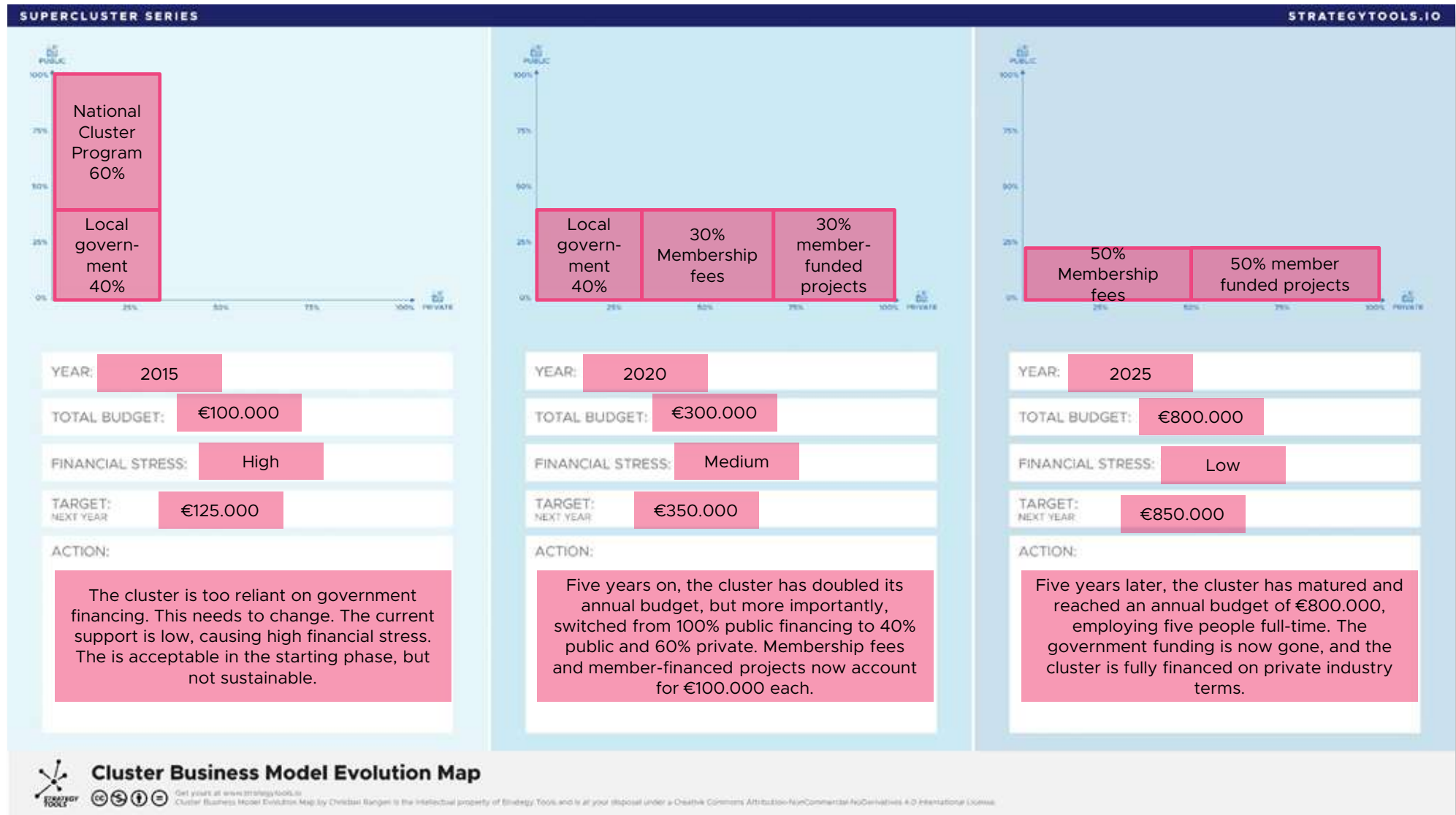
cluster business model evolution map

The Cluster Business Model Evolution Map is the big brother of the previous tool. The first tool only really comes to life once it is connected into the Evolution Map. The basic idea here is the need to constantly evolve and develop the business model over time. Typically, we think year 1, years 3-5 and then years 5-10. This indicates a business model evolution will happen over a period of a few years, not on a year-to-year basis.

In our work with cluster boards and teams, we have often been surprised at how difficult it can be to move from a single view map to the Evolution Map. Innovating around a cluster business model is not something most boards and management teams have a lot of experience with.

From government to self-sustaining Growth cluster

Here is one example of how a cluster can evolve its business model over a ten-year period, going from 100% government to 100% private financing.



The cluster is too reliant on government financing. This needs to change. The current support is low, causing high financial stress. This is acceptable in the starting phase, but not sustainable.

Five years on, the cluster has doubled its annual budget, but more importantly, switched from 100% public financing to 40% public and 60% private. Membership fees and member-financed projects now account for €100,000 each.

Five years later, the cluster has matured and reached an annual budget of €800,000, employing five people full-time. The government funding is now gone, and the cluster is fully financed on private industry terms.

intermediate level

cluster business model canvas

Next is the Cluster Business Model Canvas. The original Business Model Canvas (*Osterwalder, Pigneur, Smith*) is widely known and used around the world and has helped 1000's of people move into working visually, working with canvases and working collaboratively on complex business challenges.

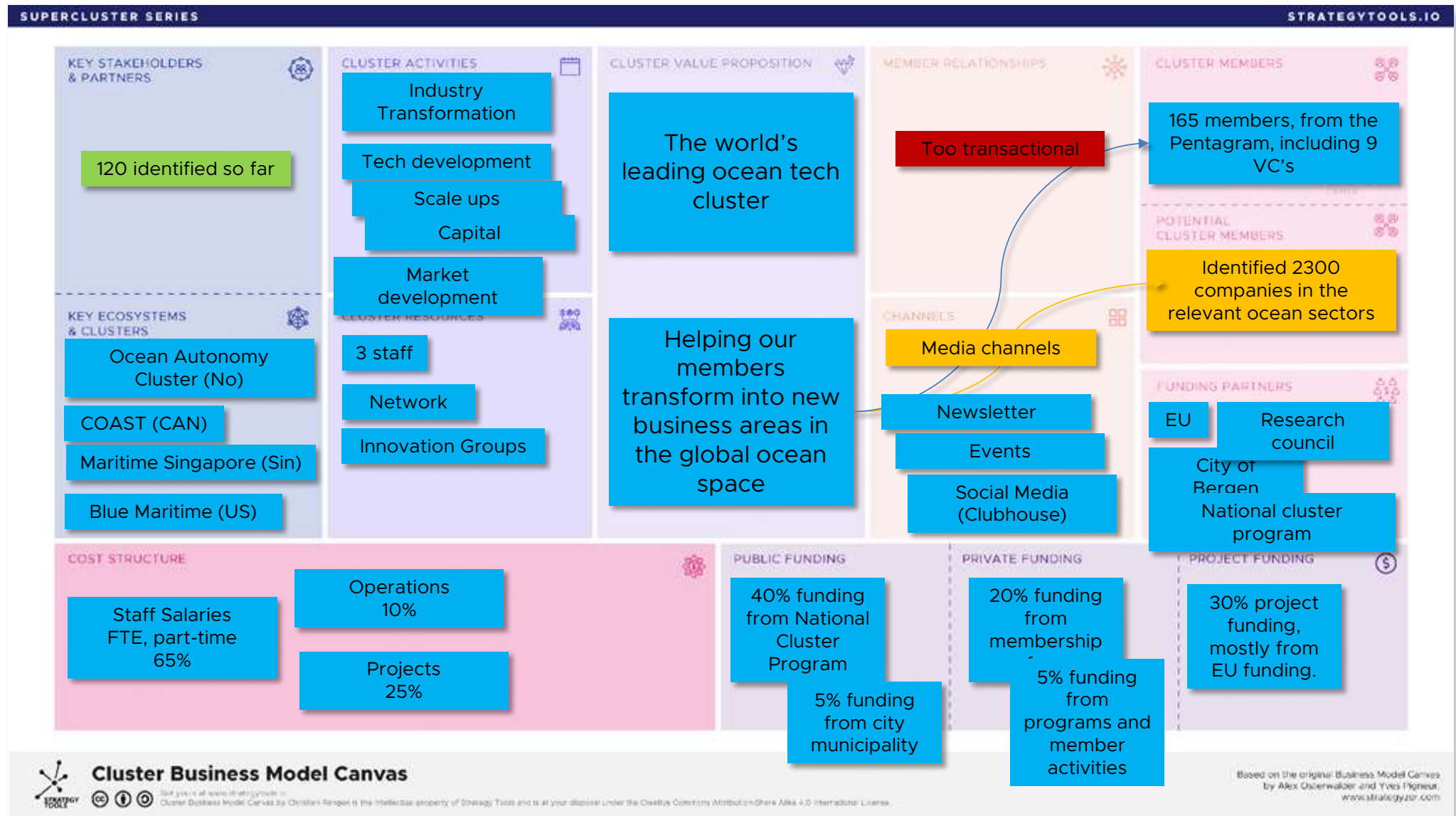
In order to make this tool more accessible to people around the world, we decided to follow the original design of the Business Model Canvas. Knowing that millions of people around the world are using the original Business Model Canvas, including hundreds of clusters trying to 'fit' their business model into it, we believe building on the original lowers the barriers to use for clusters leaders around the world.

The idea was discussed in a series of e-mails with the developers of the Business Model Canvas in late 2020. We are very grateful of their open-minded approach to developing and sharing. This Cluster Business Model Canvas would not have been possibly without the extensive work done by Alex and Yves over the years. The success of this canvas rests squarely on the foundation they built.

In developing the canvas for this report, we worked very closely with the Norwegian Innovation Cluster Program, where early movers like Kristianne and Vivian were actively testing out the different iterations, offering insights and feedback along the way. They themselves brought earlier versions of the Cluster Business Model Canvas into workshops and sessions with clusters up and down the Norwegian coastline.

Creating the world's leading ocean tech cluster

How would we design the cluster business model for a globally leading ocean tech cluster? Well, this could be one way. Notice the diversity in financing. See also the blue as as-is, and the orange as 'in action'. The orange part represent a different target group (new members), so the channels would also be different than existing members



intermediate level

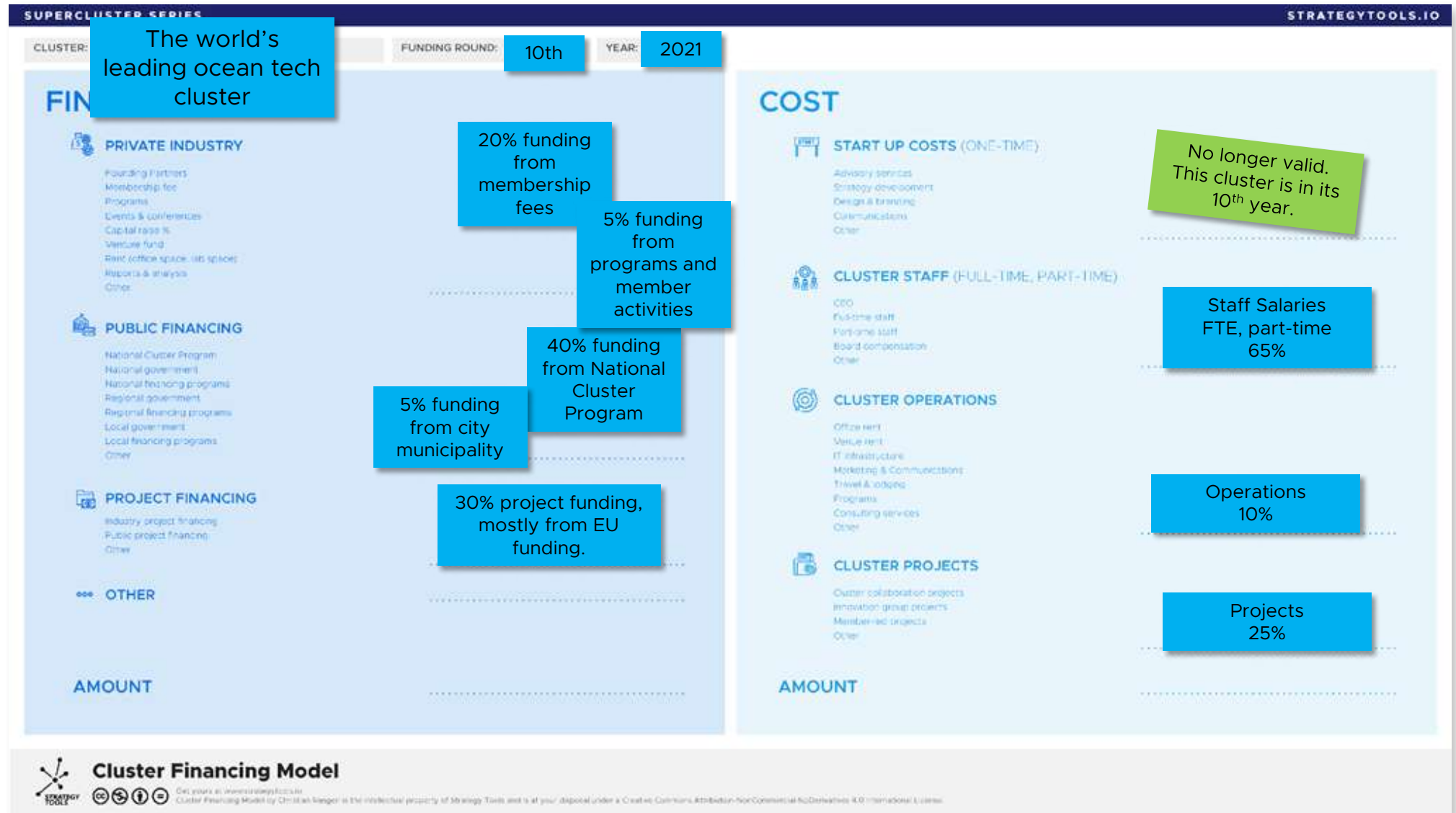
cluster financing model

The Cluster Financing Model is an easy-to-use, visual tool that allows you to move from the complexities of the entire business model and into the nuts and bolts of the financial model. The tool is a visual representation of the most common financing (revenue) and cost elements of a cluster.

Every cluster, from small starting 'baby clusters' to well developed Superclusters can easily build out their financial model using the canvas. Then, once all the key parties are on-board and aligned, can we build out the financial spreadsheets behind it.

Creating the world's leading ocean tech cluster

Building on the cluster business model canvas, we can dig deeper into the financing model. Here, we see the ocean tech cluster in its 10th year, with a fairly diversified financing model. Note the green note, with startup costs only being applicable in the first year.



intermediate level

cluster value impact roadmap

The fifth tool that should be included in this collection is the Cluster Value Impact Roadmap.

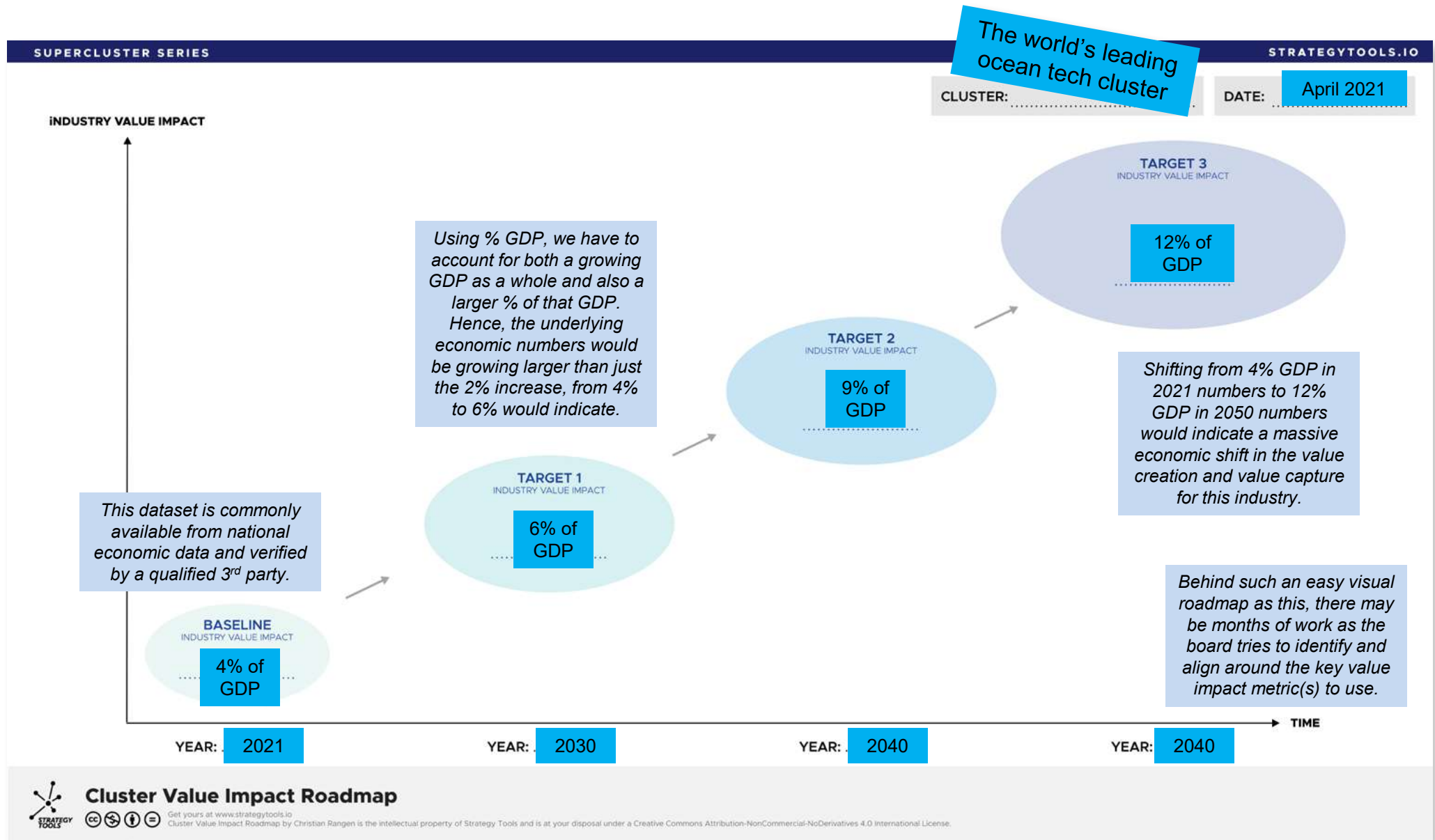
This is the tool that makes cluster boards and cluster management teams really align and focus on the collective outcome in the future.

(At least that is the idea. In reality it may take months and months of work, discussions, research, learning, a bit of frustration and finally insights and clarity to get there. One of us (Chris) has seen dozens of cluster boards fight, argue, passionately discuss and eventually perfectly align around 'our value impact'.

It may not be the easiest tool to work with, but when used correctly, the Value Impact Roadmap can help bring razor-sharp strategic clarity to the work of a cluster and cluster business model innovation.

What is the potential value impact of the world's leading ocean tech cluster?

Now it gets more interesting. This Value Impact Roadmap can go in different directions, using different value impact metrics. In this example, we use the metric of % of GDP (Gross Domestic Product) which is a commonly available statistic.



part three:
cluster business
model innovation
in action

Over the following pages, we showcase some of the Cluster Business Model tools in action.

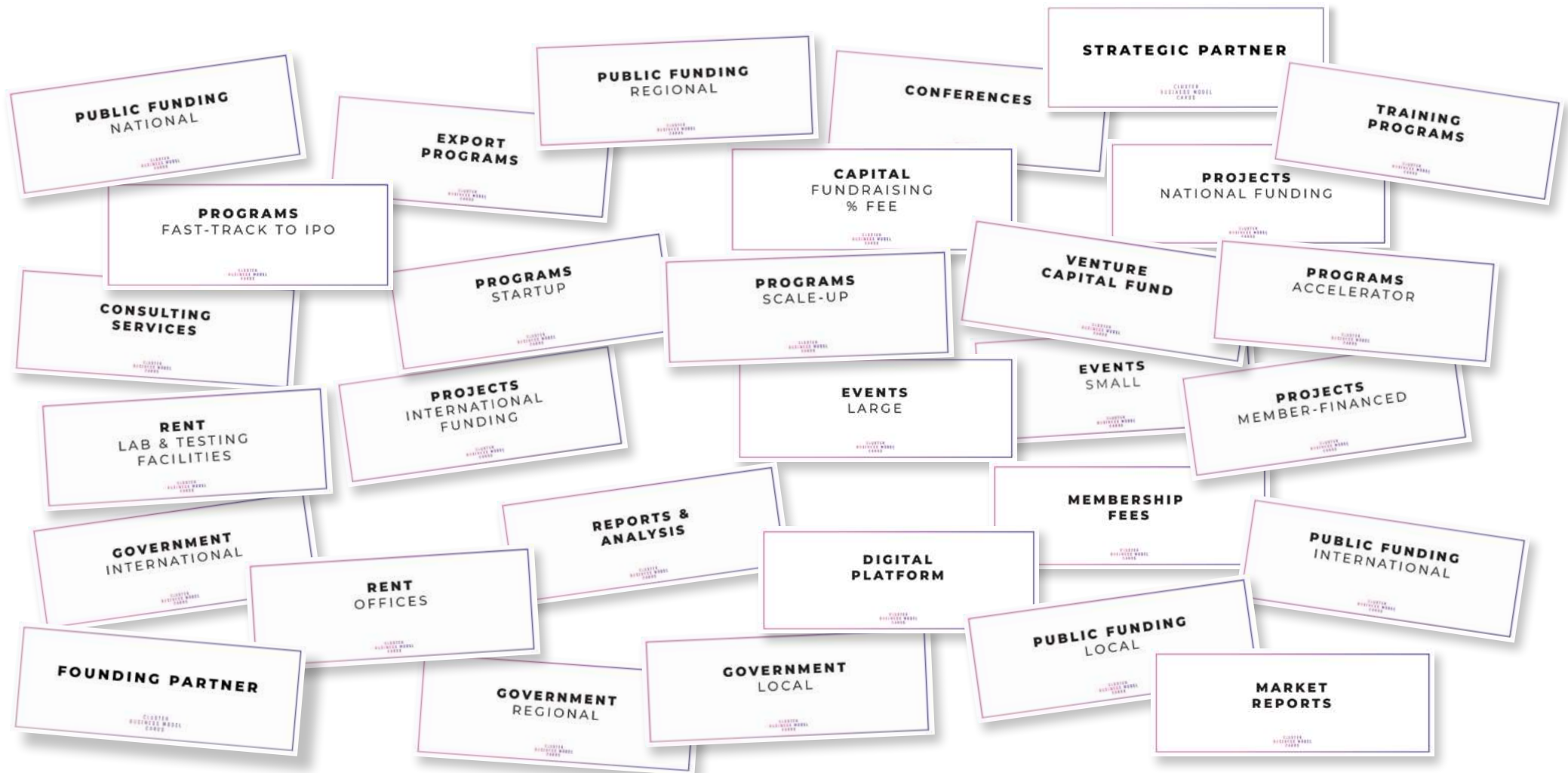
More importantly, we would encourage you to download the tools, work in this report and simply get your own use case and your own cluster into these tools – starting right now.

[DOWNLOAD NOW](#)

Cluster Business Model Cards

As a part of our research we mapped out and identified the most common business model elements for clusters around the world. In total, we identified 30 different financing elements (financing sources) for a cluster. In this report, these 30 are visualized as cards, what we call the Cluster Business Model Cards.

As you will see, these cards are an easy and visual fit with the different tools and canvases, allowing cluster leaders to quickly and readily work through both as-is and potential future cluster business models. Over the following pages you will see these 30 cards come to life with the five cluster business models tools.



The Cluster Business Model Map in Action

SUPERCLUSTER SERIES

STRATEGYTOOLS.IO



Cluster Business Model Map



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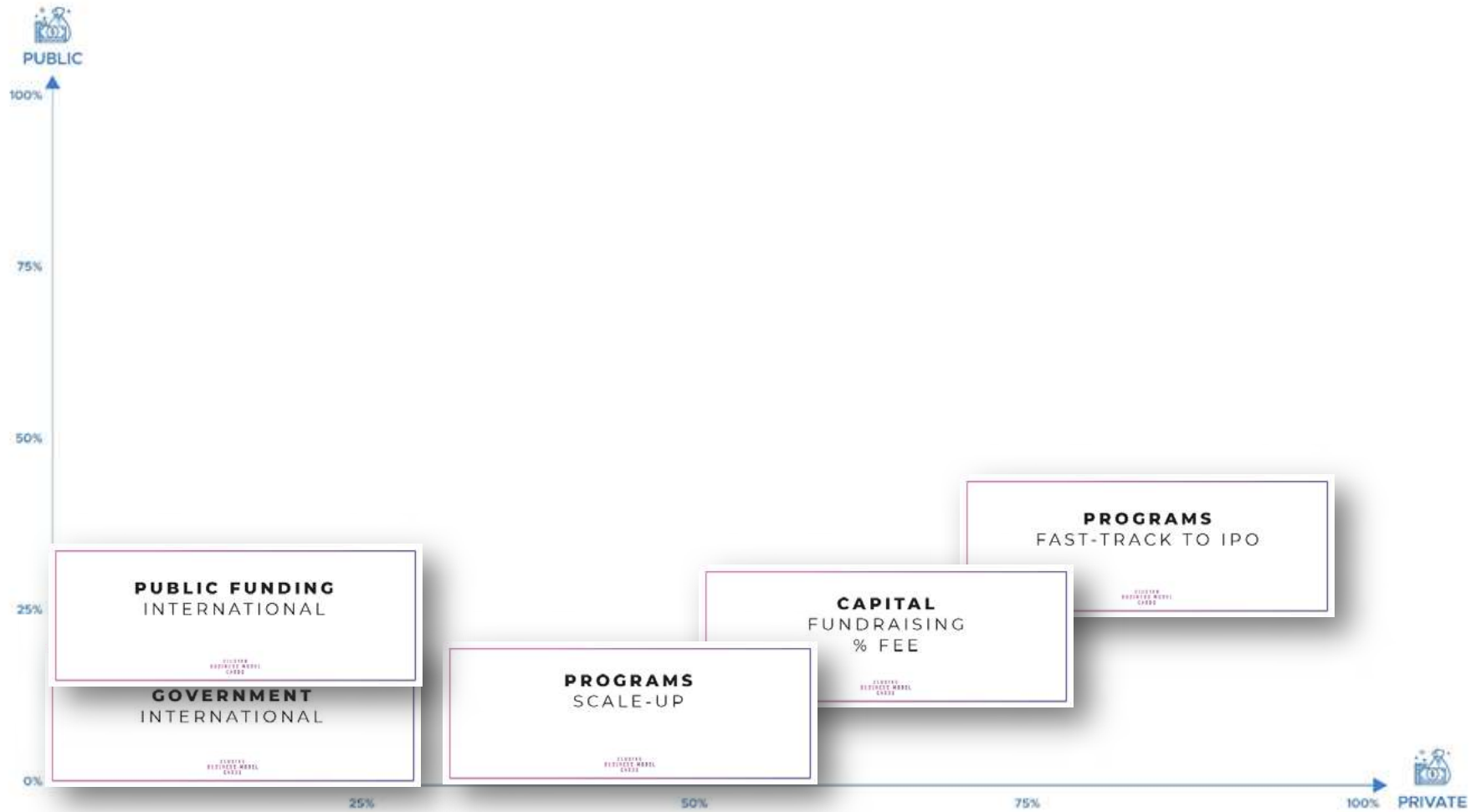
international & entrepreneurial funding

Here we see a very entrepreneurial cluster, with 30% financing coming from international government, while the remaining 70% coming from the private sector.

You can see Scale Up Programs being the first revenue source, most likely taking an ordinary program fee for young companies to participate in the program (equity vs. cash payment is always a discussion, we recommend taking equity).

You can also see the cluster taking a percentage of fundraising, helping the companies coming out of the Scale Up Program going out to raise financing. A 2,5% - 10% fee is not uncommon for professional advisors.

Finally, you can see the cluster offers Fast-Track to IPO programs. Assuming the cluster now holds equity from any of the other programs, this could suddenly become quite a lucrative funding source over time. This cluster model may resemble more of an accelerator, but it is a perfectly valid cluster business model and already in use in many parts of the world.



Cluster Business Model Map

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national, public funding

In our second example, we see a pure play publicly financed cluster.

We would not recommend this as a model for anyone. Yet, in some parts of the world, this may be the preferred model for starting out and getting the cluster off the ground for the first 3-5 years.

Here we see public financing from both local, regional and national sources. We also see 20% of the cluster financing coming from national project funding, possibly research projects or export development projects.



Cluster Business Model Map

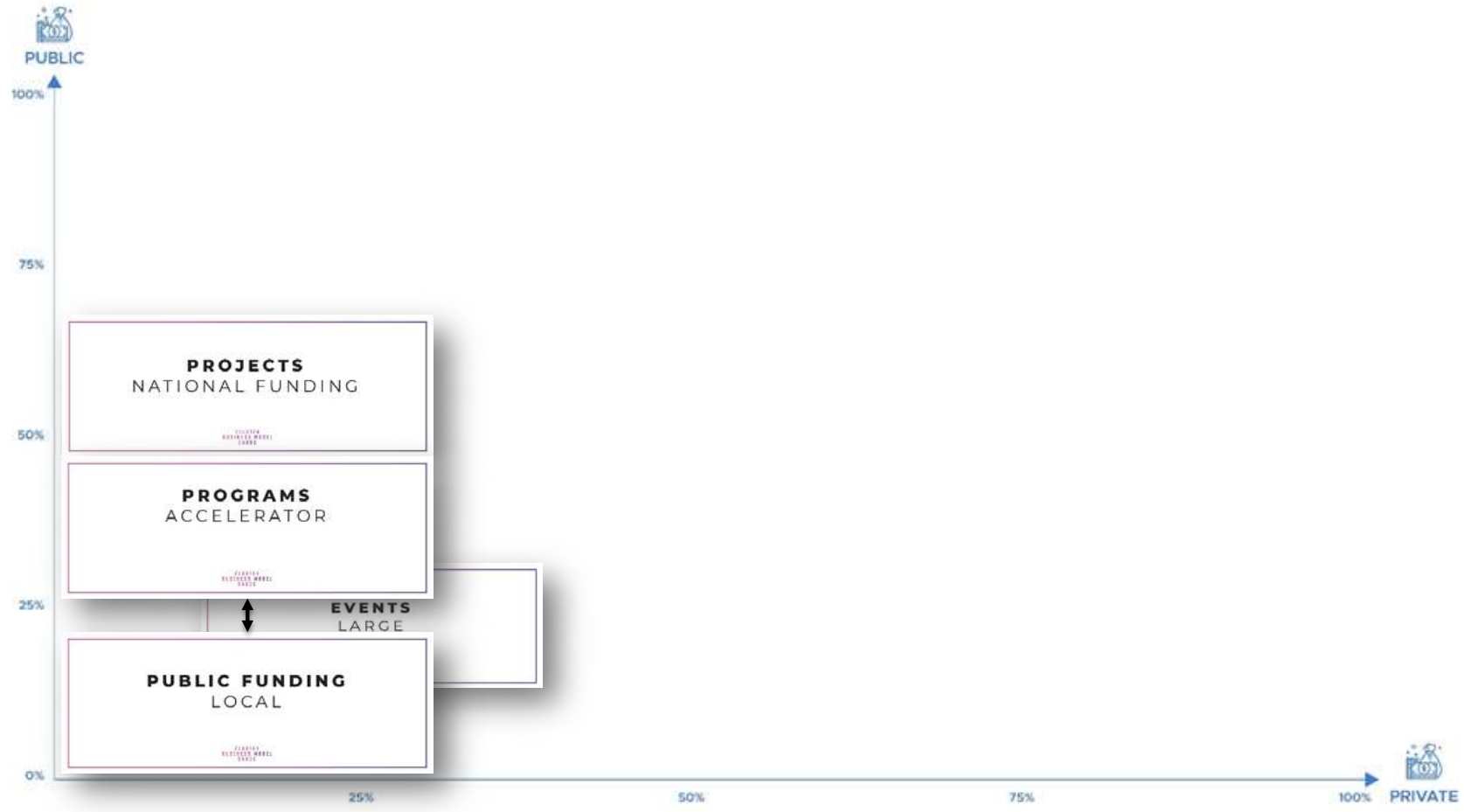
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heavy public funding

A very similar, yet different funding structure can be found here.

With local public funding supporting a publicly-funded accelerator program (happens all the time), the cluster is now able to run and operate a fully developed accelerator program, not taking any equity nor program fee from the startups (this may not be good, but happens).

Finally, there are some large national projects being funded. Tucked in the back, is one or several large events, hosted by the cluster, presumably driving some direct revenue from participants. This would be listed here as private financing, even though many of the participants may come from the public sector.



Cluster Business Model Map

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export organization

Our last example is almost run as an export organization.

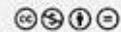
The baseline financing comes from membership fees, covering 30% of the financing. Beyond that, there are member-financed projects (not common) and training programs.

A significant part of the revenue here comes from generating market reports, market analysis and running export-driven, go-to-market programs.

This is likely to be a very business-minded cluster, with little or no government involved or public leadership participation.



Cluster Business Model Map



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from easy to complex

Over the following pages, we are going to invite you to bring your imagination and ideas to the examples. We are going to repeat these four cases we just looked at, but shift from the Business Model Map to the Business Model Canvas.

Now, we can expand on the short and easy foundation (Map) while also being able to build out far more complex business models, using the Cluster Business Model Canvas. We are not going to complete them as fully developed business models.

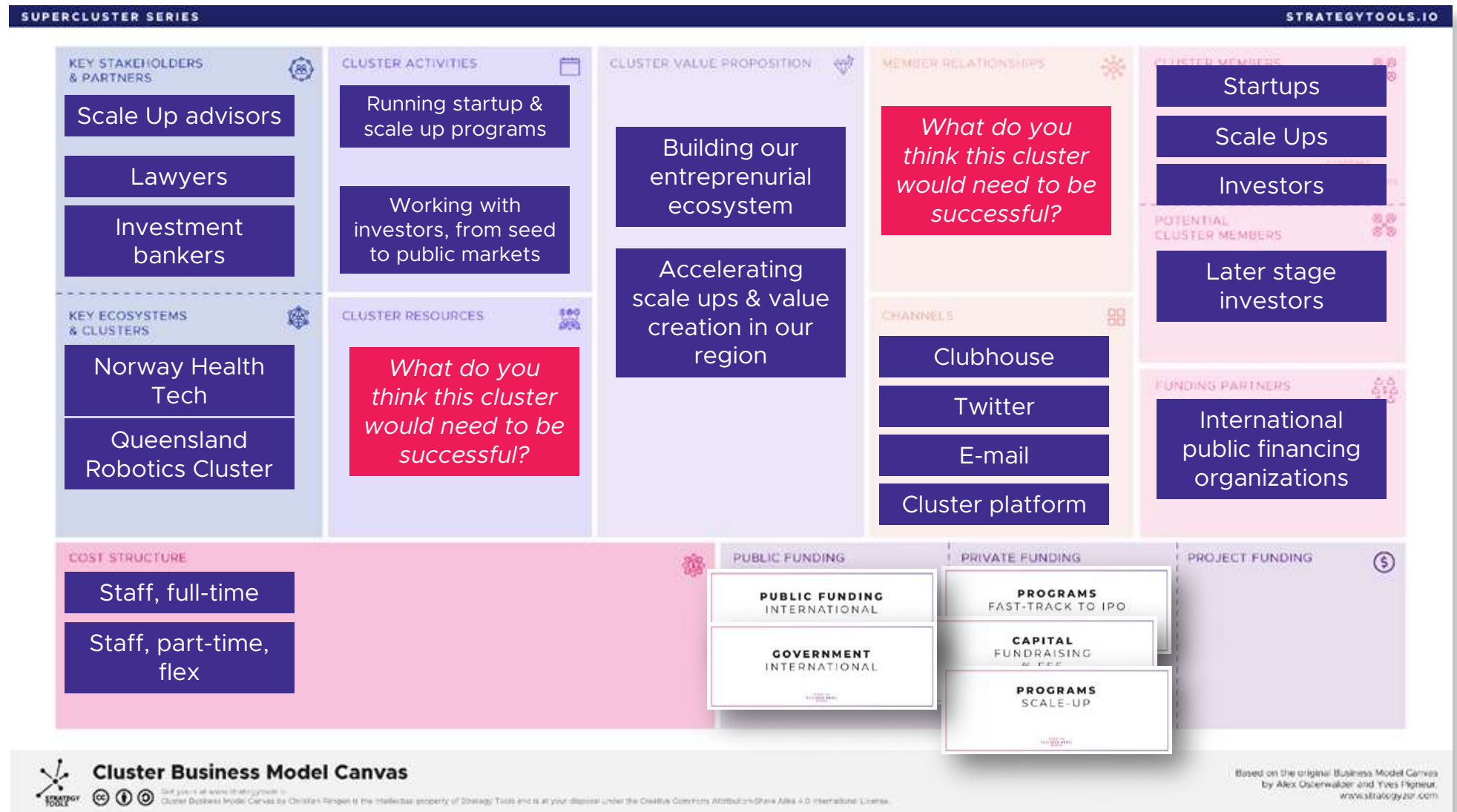
Instead, we would invite you, the reader, to think for yourself and imagine how you could or would complete this, if you were running these clusters. Think of this as an interactive exercise or simply a light brain workout.



International & Entrepreneurial Funding

Here we see a more developed version of this entrepreneurial cluster. We have seen these clusters emerge, both in Asia and Europe. They are not common as clusters, often taking on the design of an accelerator instead. Yet, these are increasingly developing as more and more clusters are transitioning from Triple Helix to Pentagram as their foundation.

In the example below, you can see some of the key parts, yet, many more elements could be added. What would you like to add to this example?

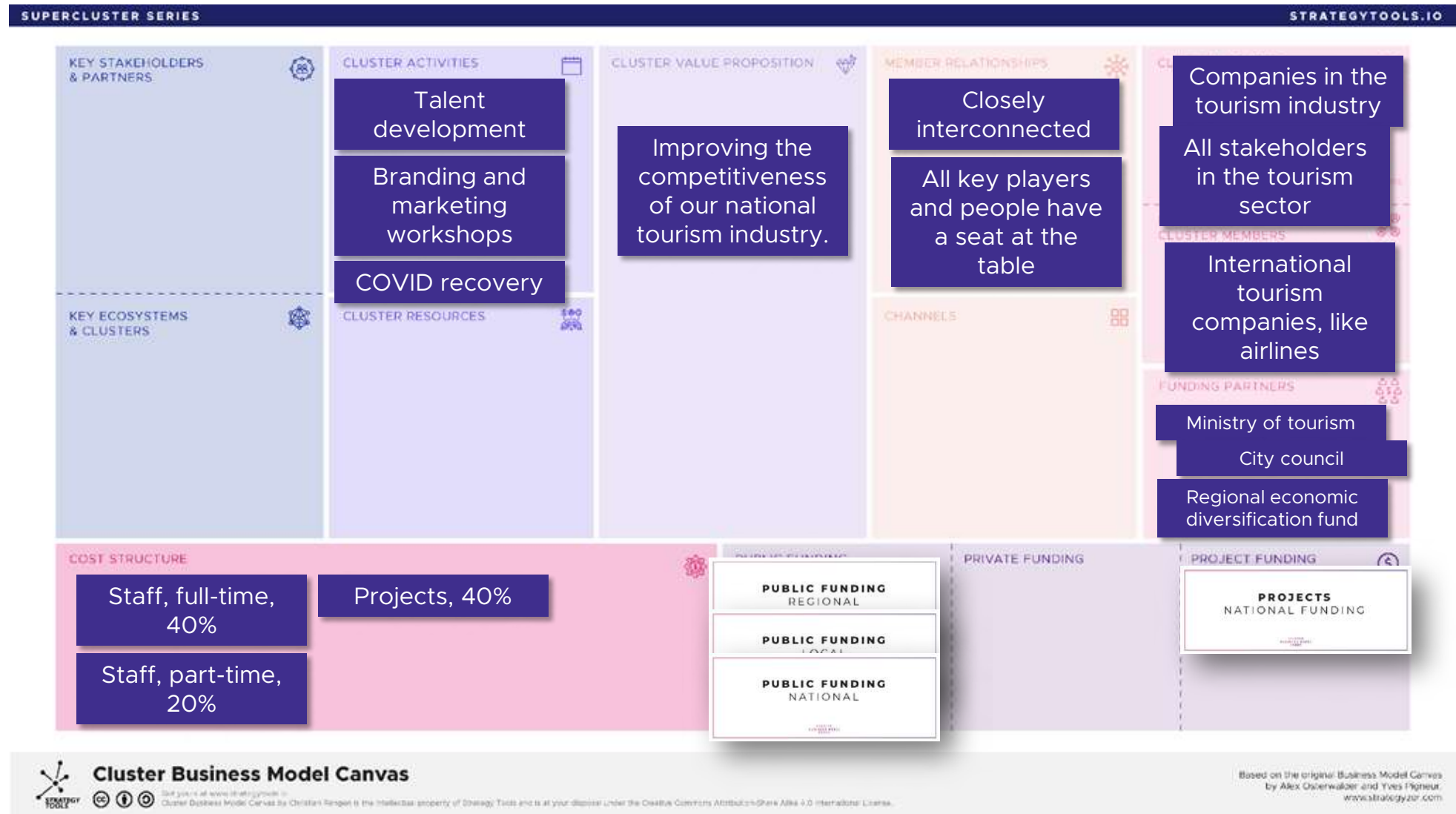


National, Public Funding

In our second example, we see a national tourism cluster. You will find these globally, with Israel, Macedonia, Costa Rica, Lebanon, Iceland, Greece, Latvia, Sri Lanka, Herzegovina (love the logo) being prime examples. Some countries, like Norway, may have multiple tourism clusters (Norway has 6-7).



Below is one example of such a tourism cluster. How would you develop this further?



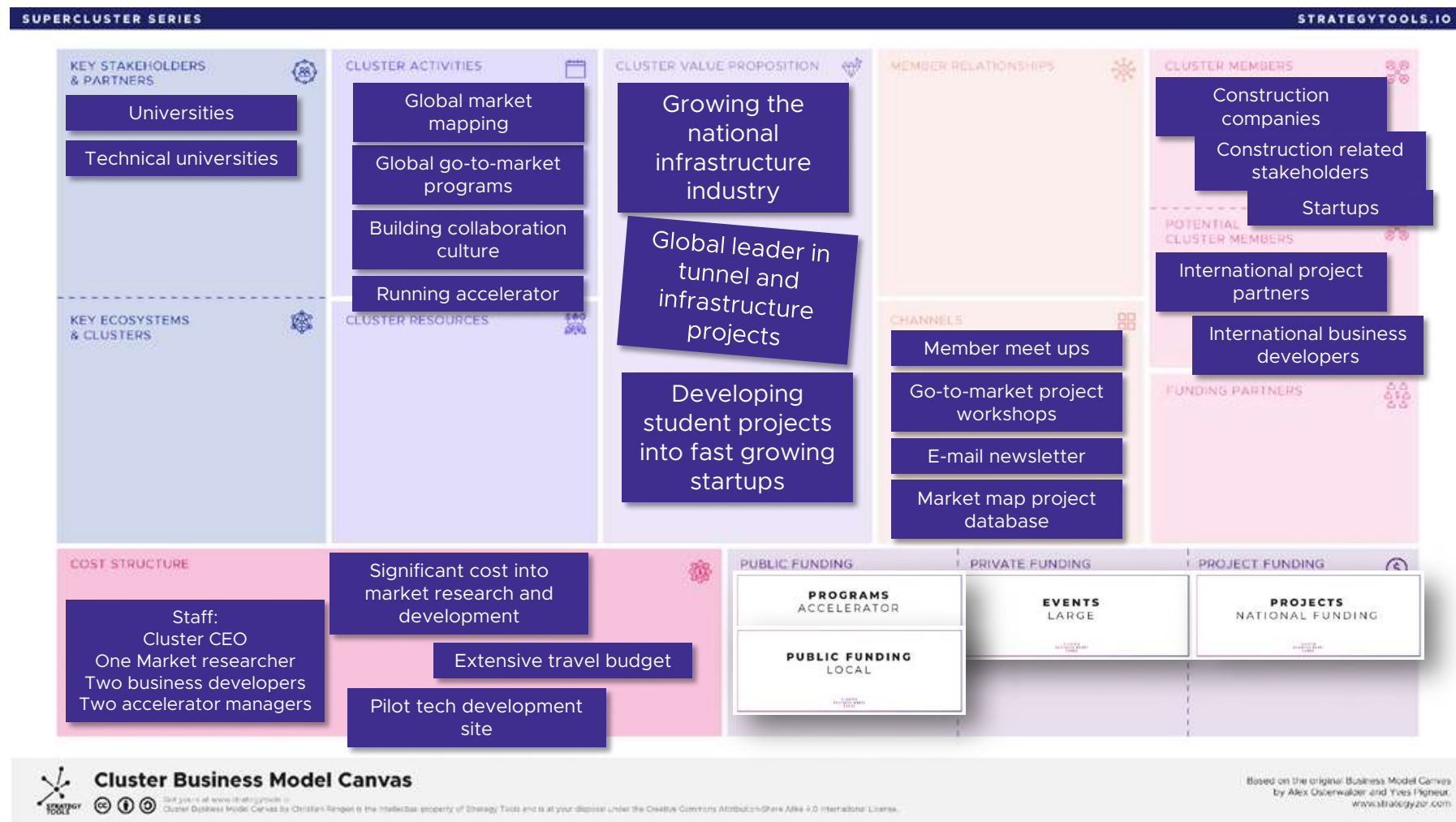
Heavy Public Funding

Our third example is based on a real-life infrastructure, road and tunnel cluster one of us has had the privilege of working with over the years. This is a publicly funded, but very market-oriented cluster. The cluster is actively doing market research and global business development together.

Several people are employed by the cluster, exclusively mapping out upcoming bid and tenders around the world, then putting in consortium-led bids amongst the cluster members.

Notice that one of their “Channels” is a market map project database containing all upcoming tenders that could fit the cluster’s members. Second, the development of student projects into fast-growing startups allows the cluster to attempt turning student projects into high-tech solutions. This helps bring more high-tech to the cluster and the bids they compete for.

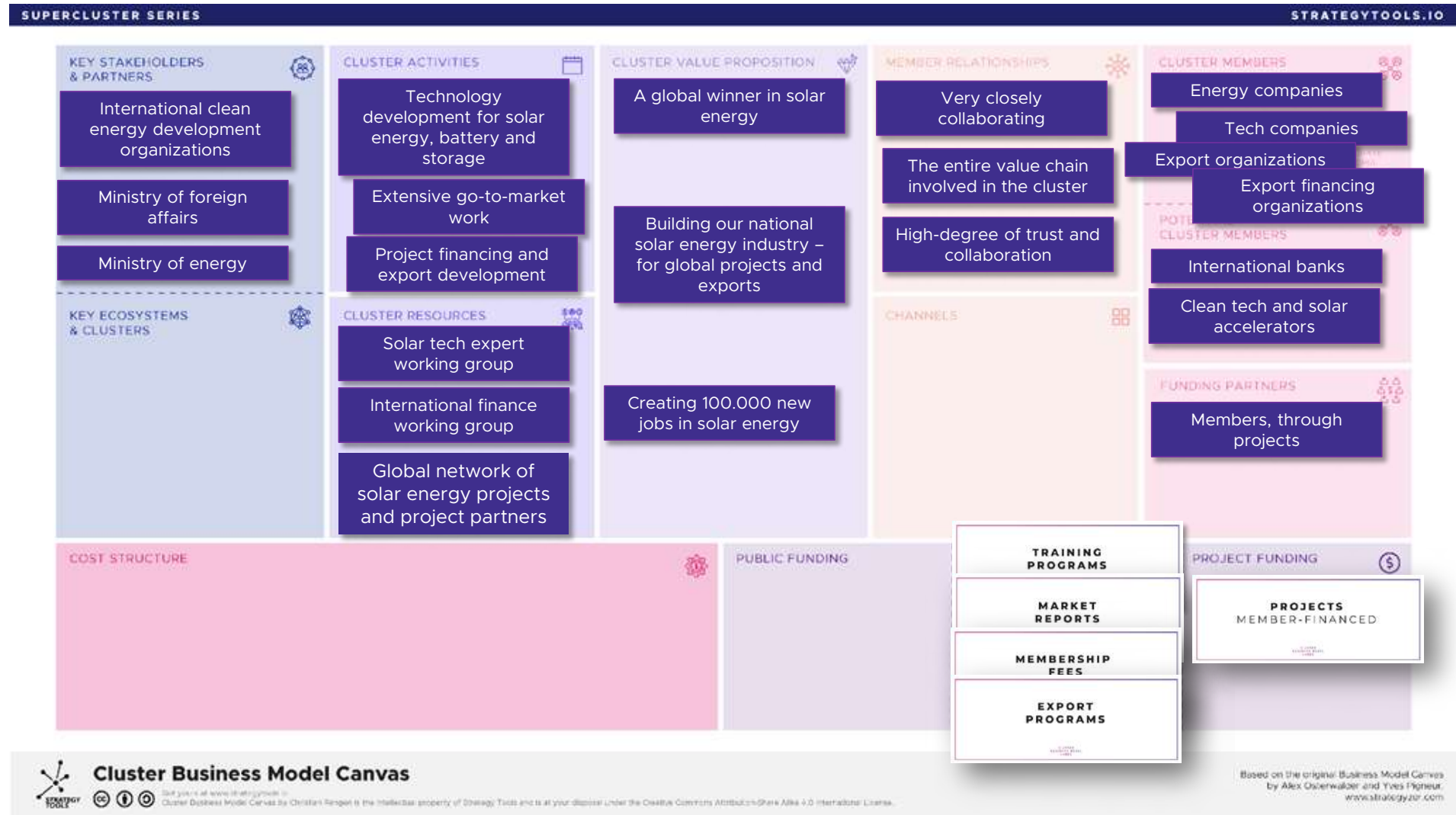
In this example, the cluster is fully publicly financed, except for the large annual conference with 400+ participants.



Export Organization


The fourth example is a national solar energy cluster with strong global export aspirations. It has a very different business model. Here, all financing comes from private (member) sources, combined with significant member-financed projects and project development.

This cluster aims to create 100,000 new jobs in the solar industry, mostly through aggressive project development in international markets. This is done in close collaboration with the national government, notably the Ministry of Foreign Affairs and the Ministry of Energy. These can be key partners, despite not funding the cluster in any way. This could be a pretty exciting cluster to work for, don't you think?



understanding cluster business models





Over the four previous pages we outlined four different business models for clusters – and left some space for you to think and add your own perspectives on each of them.

Over the past few years, we have mapped out 100's of such cluster business models around the world. We have been, and continue to be surprised and inspired by the wild diversity and massive complexity emerging from these exercises.

We believe every cluster, every cluster CEO and every cluster board would greatly benefit from having a basic understanding of cluster business models and being comfortable mapping out, sketching and designing winning business models for their respective clusters. Over the coming pages we will start on that journey, with expert insights, case studies and hands-on recommendations on designing winning cluster business models.



part four:
putting the
toolkit to use

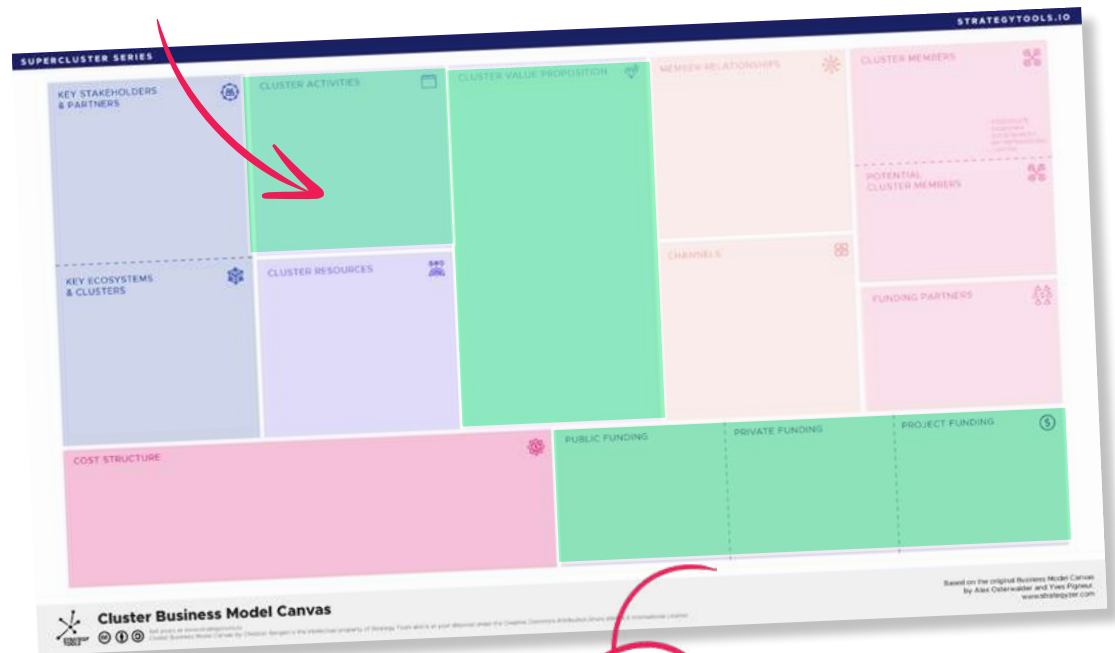
snapshots from cluster tools in action

How can cluster leaders – at all levels – start putting these tools to work?
Over the coming pages we will show a series of action-based examples of how cluster leaders can engage their teams and organizations around these visual tools.

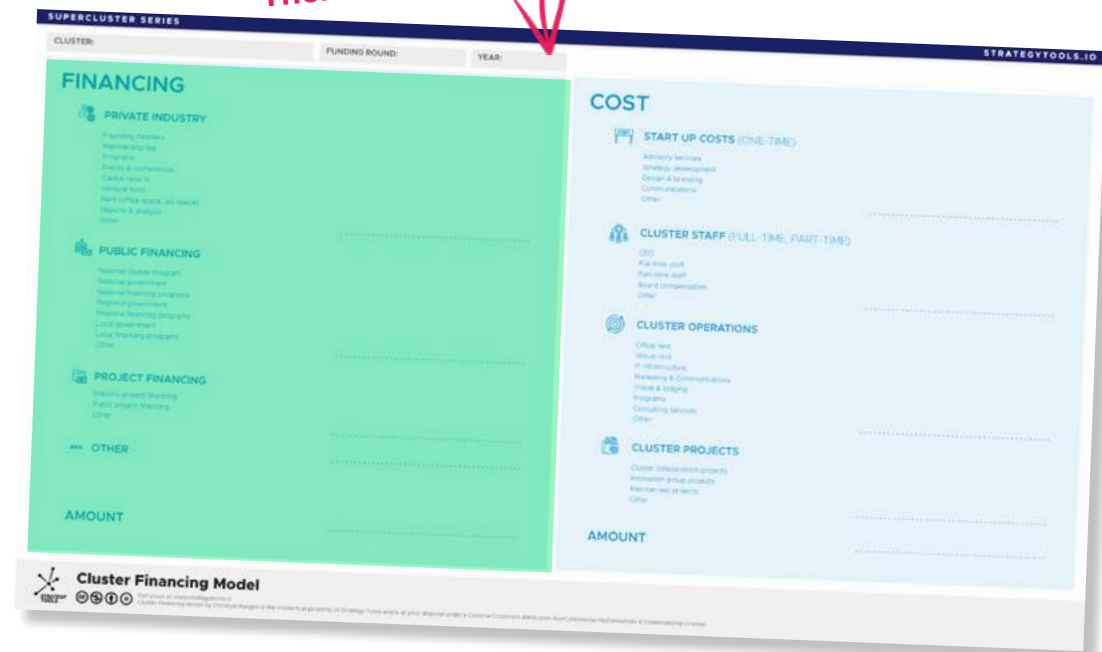
If you are a design thinking expert like one of us (Victor), this may come natural. But we have seen cluster leaders globally pick up and instantly start using these tools in action, in real-life. Here is your guide.



Start here



Then move here



How would a cluster CEO work with the board to create a common understanding of the cluster business model?

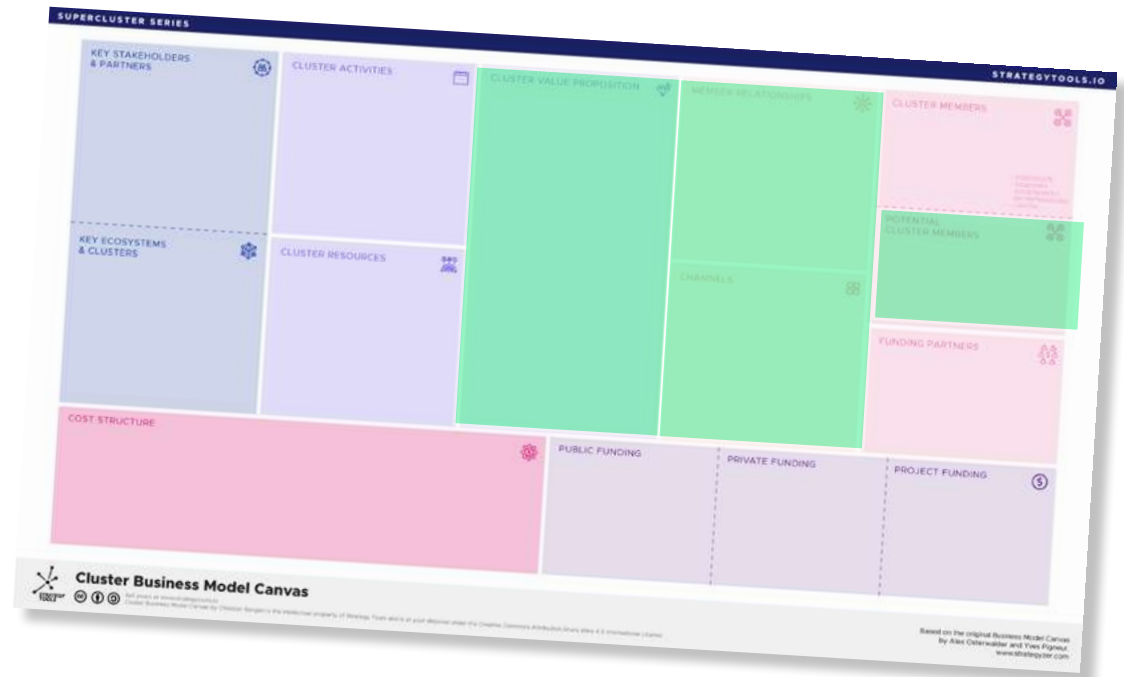
Starting with the **Cluster Business Model Canvas**, map out **Value Proposition**, **Key Activities** and the **Three Types of Financing** would be a great and easy start. Then move into the **Cluster Financing Model** to dig into other, future financing opportunities.

This exercise can be done in-person, with paper based tools or completely digital using a platform like Miro, Mural or even PowerPoint.

How can a cluster communications manager better grasp and communicate the cluster's basic business model and value proposition to recruit new cluster members?

Here, a Communications Manager could map out the **Cluster Business Model Map**, and use that exercise as a clarification for herself and her own thinking.

Following that, she could map out some of the key elements in the **Cluster Business Model Canvas**, with a special emphasis on **Value Proposition, Channels, Member Relationships** and finally use this in external communications to new cluster members.



Start here



Then move here





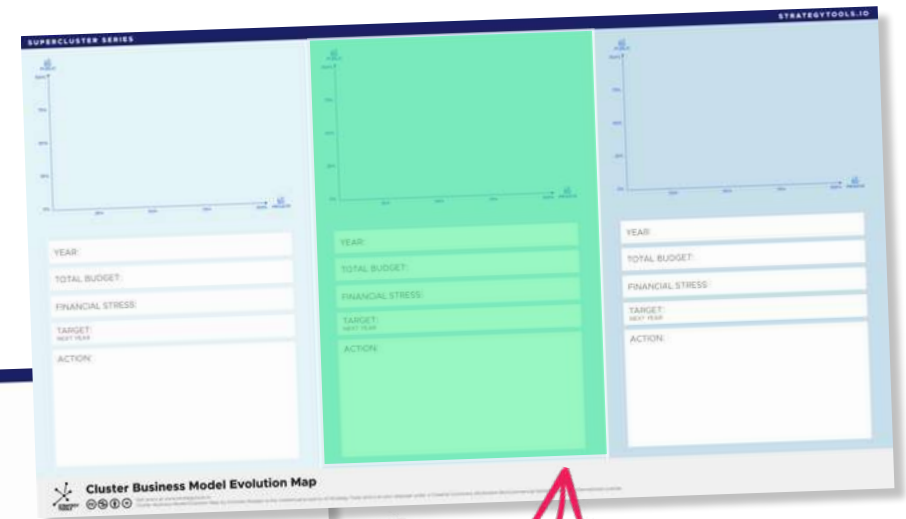
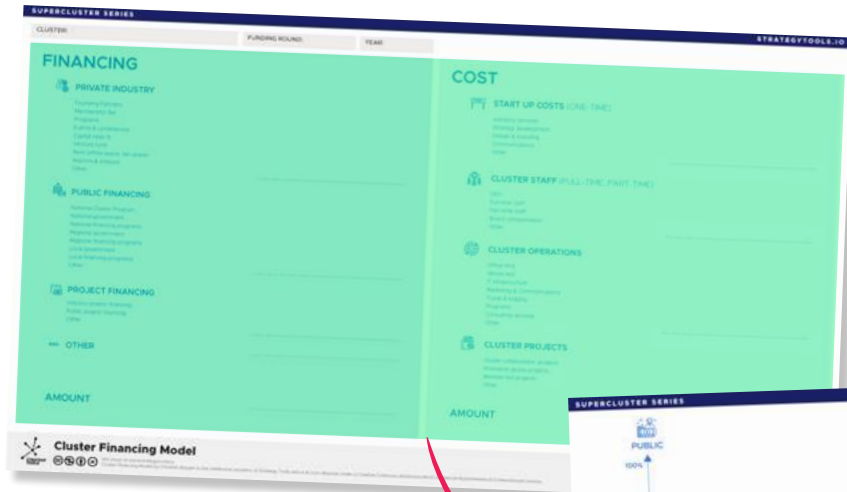
A cluster CFO would use these tools very differently.

Here, a CEO starts by mapping out the current financing and cost of the cluster.

Next, he outlines some ideas around increasing the private financing side of the cluster.

Finally, he works through the Cluster Evolution Map, with a focus on how the next phase of the business model could look like. His outlook would typically be looking 2-3 years ahead, trying to take a more strategic view on the financing.

Start here

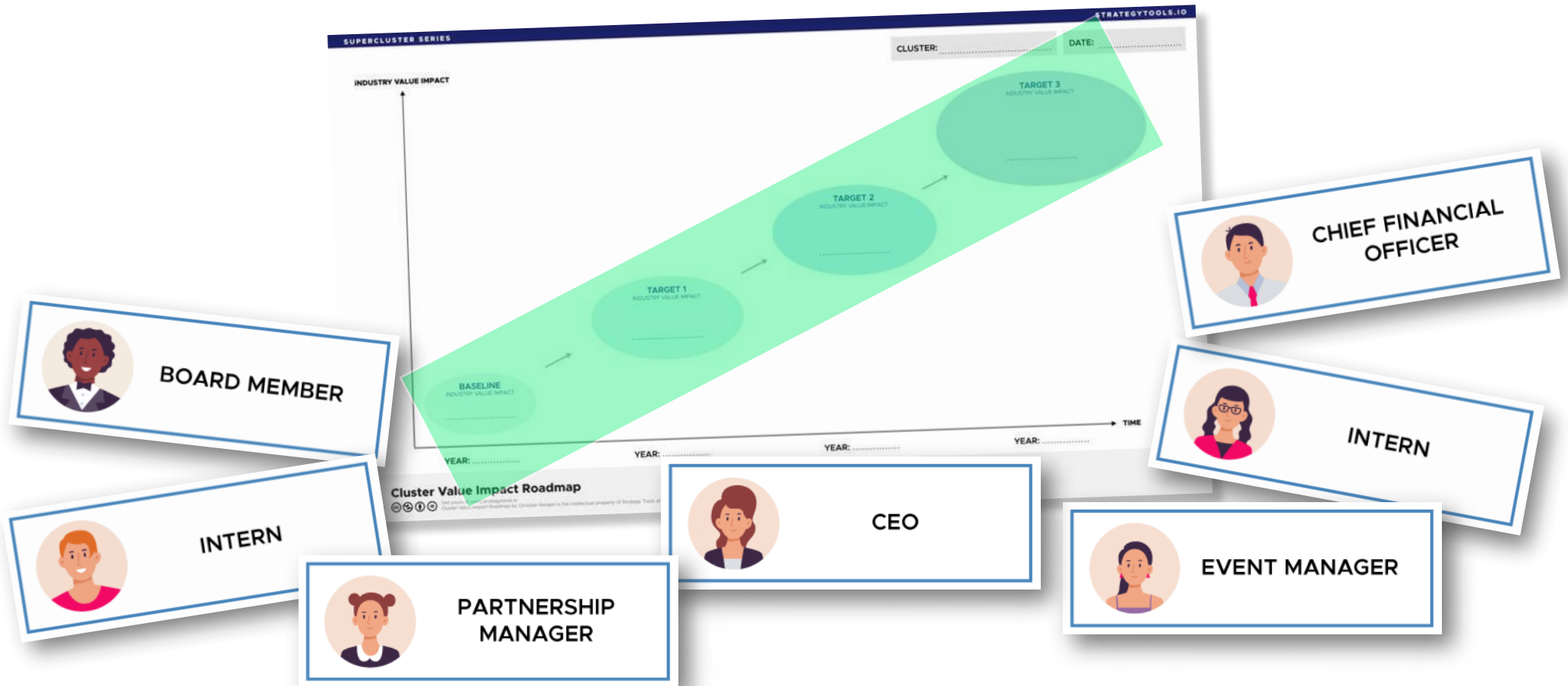


A cluster working group, led by the CEO, would be working on the Cluster Value Impact Roadmap together.

This could easily be a 3-month project, split into three phases:

- Mapping other clusters' value impact**
- Research and brainstorm potential value impact for us**
- Decide and implement a set of value metrics**

A Board member would typically be actively involved in the project. Notice the two interns. Many clusters use interns for various roles in projects. These can be Bachelor, Master or even Ph.D. students. A Ph.D in economics and another in statistics could be pretty good project members to have along for the work on developing the cluster's value impact roadmap...



what do your use cases look like?

These four examples are just quick snapshots of how a cluster could engage its key members and stakeholders around working visually on these canvases.

You, bringing these tools back into your own cluster organization, could probably imagine 100's of other use cases.

Whether working online, in-person or blended, these visual canvases and the visual way of working can be brought in to solve any challenge you may have around business models, value impact and – over time – cluster strategy.

In Mexico,
the regional
government
is the key
financing body
for many clusters







part five: expert insights



A NEW WAVE OF INNOVATION CLUSTERS IS ON THE RISE.

ARE YOU READY TO INCREASE THE IMPACT OF YOUR CLUSTER?

CLUSTERS OF CHANGE BOOTCAMP

THE CAP
THE FIRST EUROPEAN CLUSTER ACCELERATOR PROGRAMME





starting a cluster business model revolution in europe



Bianca Dragomir,
CEO
Cleantech Cluster Valencia Region

'We are humans and our nature is to fly'...

Stephen Hawking said it, cluster leaders prove it. As a cluster leader myself, my daily routine is to multiply impact as quickly as possible, to as many people as possible, as consciously as possible. Like a ripple effect.

Sparking energy, information flows, (re)bonding (new) value chains, integrating multiple voices, leveraging money, making investors sweat equity, daring to disrupt. Basically, tapping into everything that can move the industry forward. Clusters are givers and orchestrators by nature. In this lies their essence. This can be both their Achilles' heel and their extraordinary power. When they work with focus, at speed and scale, on missions that matters (for people and planet), they generate overlapping ripples of change that catapult industries into the future. Clusters are powerful beyond measure.

The coronavirus 'Black Swan' pandemic has provided rocket fuel for clusters to punch above their weight. They proved 'antifragile' at a time that was highlighting our most fragile relationship with the planet. For instance, more than 1100 offers were gathered by the European clusters in one single week to overcome the supply chain disruption of PPE when the 'just in time' schemes broke. Resilience is, therefore, a network function. And a good network, one that catalyzes the velocity of change, is now the only currency that matters.

So the irruption of disorder in our industries and lives have held a magnifying glass on European clusters. This shows clusters can be the spark engines of industry (re)growth, crisis-proofing SMEs and helping to navigate the rough seas of the pandemic.

For more than a year now, the pandemic has been imprinting itself upon the world's psyche. While the end of this pandemic is still a while away, industrial clusters are now called to double punch above their weight: our input is now being sought to bring 'skin in the game' and orchestrate Europe's boldest, most strategic, large-scale projects for the Green Recovery, on top of sustaining the industrial disruptions caused by COVID-19.

How can we, European clusters, catch this wind in our sails?

'Doing' clusters

Europe – and the world - needs impact clusters at scale.

Today, industry is grappling with an unprecedented rate of transformation. Some sectors are disrupting themselves, from within. The world of energy is blending.

Think of energy digitalization: multi-trillion euro markets being reshaped by the least usual market players, the 'Km 0 energy' revolution, SMEs 'uber'-izing self-consumption in local renewable energy communities powered by citizens.

New - active - business models that show that energy has become the new internet and we live a paradigm shift. Incremental innovation or single-point solutions or technologies are simply not enough anymore.

Industry has been partnering shamelessly in new ways for a while now, co-creating new business models and novel solutions that integrate multiple needs, that of business, research, investment and society at the same time.

At this turning point of Europe's innovation chapter, we are all on a journey of becoming a better version of our(business)selves. The European clusters are at different stages in their journey. From clusters in-the-making to superclusters (in-the-making).

But Europe's main fear is delay. On a race around the clock to become the first climate-neutral continent by 2050, we need to innovate at a speed and scale humankind has never seen before. Europe is currently delivering 30% of the scientific papers and only 7% of the innovation to market worldwide. The next decade will decide if the century is going to be Chinese, American or European. High stakes, high games.

In Europe there are currently 3,000 clusters. A quarter of the jobs are in clusters. We know that productivity in European clusters is 25% more than average productivity and SMEs create more jobs, better paid and bring more innovation to market.

Being in a cluster is like climbing a mountain and receiving a jet pack.

The issue: a critical mass of inward-looking, one-dimensional, subsidy-reliant clusters. Innovation is either publicly funded and research driven, or entrepreneurial and finance/VC-driven.

The imperative: a critical mass of outward-focused, multi-dimensional and financially diversified clusters. Engines of growth, innovation ecosystems that are agile, open, interconnected and active entities, uniting all players in shared value and co-creating innovative ventures with their members. Clusters spawning repeatable, scalable business models, propelling our industry into the driver's seat of the 21st century. Today.

Just as we cannot do business as usual, we cannot ‘do’ clusters as usual. At least, not for long.

The Industry 2030 report of the European high-level industrial roundtable mentions that clusters need to go further now and seize the moment to become a new generation of value creation networks that create new virtuous circles. We are now called to shift whole systems not just a single sector, bringing our most provocative ideas to progress simultaneously across policy, technology, citizen engagement, investment, in an incredibly fast-pacing environment.

To make this happen, we need:

1. Clusters of change hitting every corner of Europe. A new generation of truly open, multi-collaborative, innovation-driven, cross-sectorial, mission-oriented and purpose-powered ecosystems delivering systemic change on what matters for Europe, namely the ‘twin’ (digital and green) and skills transitions.
2. A new leadership mindset.
3. A revolution in clusters’ business models.

After working with hundreds of cluster managers globally, the last one is what keeps most of them awake at night.

[Read: Industry 2030 High-Level Industrial Roundtable Report](#)





High-hanging fruit

A business model captures how we deliver value to stakeholders. A cluster business model captures how to multiply value by multiple types of stakeholders, integrating a multiple voice and creating multiple spreads of experiments that trigger multiple financial returns (for the stakeholders involved and for the cluster itself). The latter is a natural consequence.

A cluster business model is not rocket science. If you nail it, you scale it. And the magic starts. You find multiple ways to be and grow as an ecosystem, within and outside the boundaries of your cluster. And you generate repeatable, scalable business models.

But creating the next generation of high-growth, high-impact clusters is a bumpy ride. So, get ready for the turbulence. A few missing keys that worked for me:

First, nail the pain

Place your members 'in the driver' seat'. The magic always starts with meeting the unmet need. So start building 'from within'. At the core of Avaesen Cluster turnaround is a tailored action plan on a 'no cure, no pay' basis for members. We simply nailed the pain of each paying member, agreed on an action plan, then we deliberately created value propositions.

Over the years, we have sophisticated our strategy, but talking to our members (and to any relevant non-members, too) periodically is at the cluster's core. I know, it is sometimes energy draining, but this 'back-engineering' comes with big rewards. It helps you take the cluster pulse, access market intelligence, gives you capacity to make wild guesses and 'joining dots' for new partnerships, compare and contrast industry needs and trends, perform reality checks for policy making, and build solid arguments for your talks with investors.

Quick advice: get to less obvious answers. Extra boost: grab two of my favorite little books. 'The mom test' (Rob Fitzpatrick) and 'Talking to Humans' (Giff Constable).



Make it rain

Having meaningful conversations with your members leads to value propositions that literally makes their heart rate go up. My experience is that only this leads to a fit-for-purpose service that builds trust. And it leverages money for your cluster while leveraging money for your members. The ripple expands.

One example: Our Think Tank Smart Cities links city mayors as problem-owners with companies and innovators as solution-providers and with investors and institutions as funding providers. We co-design smart city roadmaps with decision makers, bringing Mayors, CEOs and investors at the same table.

Business model: Mayors have an in-kind contribution in exchange of collective intelligence and solutions to their specific challenges. Companies access the real city 'pains', do business and pay a membership fee; if the solution targeted does not exist, we co-create it with our entrepreneurs and research centers and this is a value proposition for start-ups and investors. The latter gives access to innovations and new investment opportunities. The cluster generates income, business, innovation to market and its impact expands.

In 2020, our cluster mobilized more than 49M EUR of public funds for the specific city challenges. The business model works.

Kill it or scale it

The clusters' power lies in the interdependencies of its parts. And how they are orchestrated. It's a complex system in which cluster leaders continuously perform spreads of innovation experiments. Not everything will flourish. The key here is to fail fast and scale fast.

One example: After the global lockdown, the Green Recovery context has emphasized the need to push one level forward the regulation to renewables deployment in the Valencian Region. Avaesen worked together with three regional ministries of three different political parties to reduce the time to market for renewable energy installations by up to two years. This will create 3500 new green jobs and attract 5 bn EUR investments in the region in the next 5 years.

Based on this success, we launched the local energy communities hub, with the participation of two other regional ministries (and political parties), the leading market players in this field, the end users, the Union of Consumers and The Property Owners Cluster. We aim at building at least 30 new local energy communities in the region in 2021. This will attract new members for the cluster, funding for this new energy model, will reduce up to 80% of the electricity bill for consumers and will open new markets for our innovators.

Behind all our projects is our drive to elevate positive impact by building repeatable, scalable business models. We test, we validate, and then we replicate. Just like a start-up.

Most successful clusters I know are not execution machines, unlike big corporates often are. They are like start-ups, testing, scaling-up what's successful (fast!) and creating more robust business models.

Just like Avaesen in Valencia, whether it's the Ruhr cluster in Germany (which radically shifted from mining to green tech); the water cluster in Leeuwarden (which turned into the European Centre of Excellence in Water Technology in a city with no university); the Paper Province cluster in Sweden (leading the shift from paper to biobased chemicals) or Transylvania Cluster in Romania (IT cluster propelling an ecosystem of cross-sectorial innovations around Cluj city), these clusters – and the list could continue - are always on a discovery journey of their own cluster business model. Always with a reset button in their hand.

Always getting a jolt of energy from 'doing' the cluster. Always conscious of the need to lock themselves out of the usual cluster business model scenarios.

That's what I call fearless leadership. Clusters of Change for our times.

And onwards!

There is still a lot of work to be done to activate a critical mass of clusterpreneurs across Europe. If you want to get inspired, join the wave at www.clustersofchange.eu.



In Australia,
little cluster funding
or support exists.
That could be
changing.









Norwegian
Innovation
Clusters

the board's role in cluster business model innovation



Vivian Lunde,
Senior Advisor
The Norwegian Innovation Cluster Program



Kristianne Paasche,
Special Advisor
The Norwegian Innovation Cluster Program

One of the driving forces behind this report has been Vivian Lunde and Kristianne Paasche, both cluster experts with the Norwegian national cluster program. We caught up with them for a brief conversation on the board's role on cluster business model innovation.

What is the board's role in shaping cluster business models?

In our experience too few of the cluster boards are sufficiently focused on this. Up to recently it seems that it is us, the national cluster team, who have been the most concerned about it.

A lot of board members, when they enter a cluster program, have a narrow and too short time perspective on the cluster. They don't really think about the long-term financing, until it is almost too late.

What role should the board take?

The cluster board's role is to ensure the cluster remains relevant - it is critical that clusters are focused on the most important needs of their members - and to do this, they need to focus on the business model.

The board's role is to set the strategic direction for the cluster, and to ensure that they have the resources to achieve their goals. If they want to do this in a good way, they also need to be focused on the business model. They are linked together. Few boards think sufficiently about this.

What role should the cluster - ideally - board take?

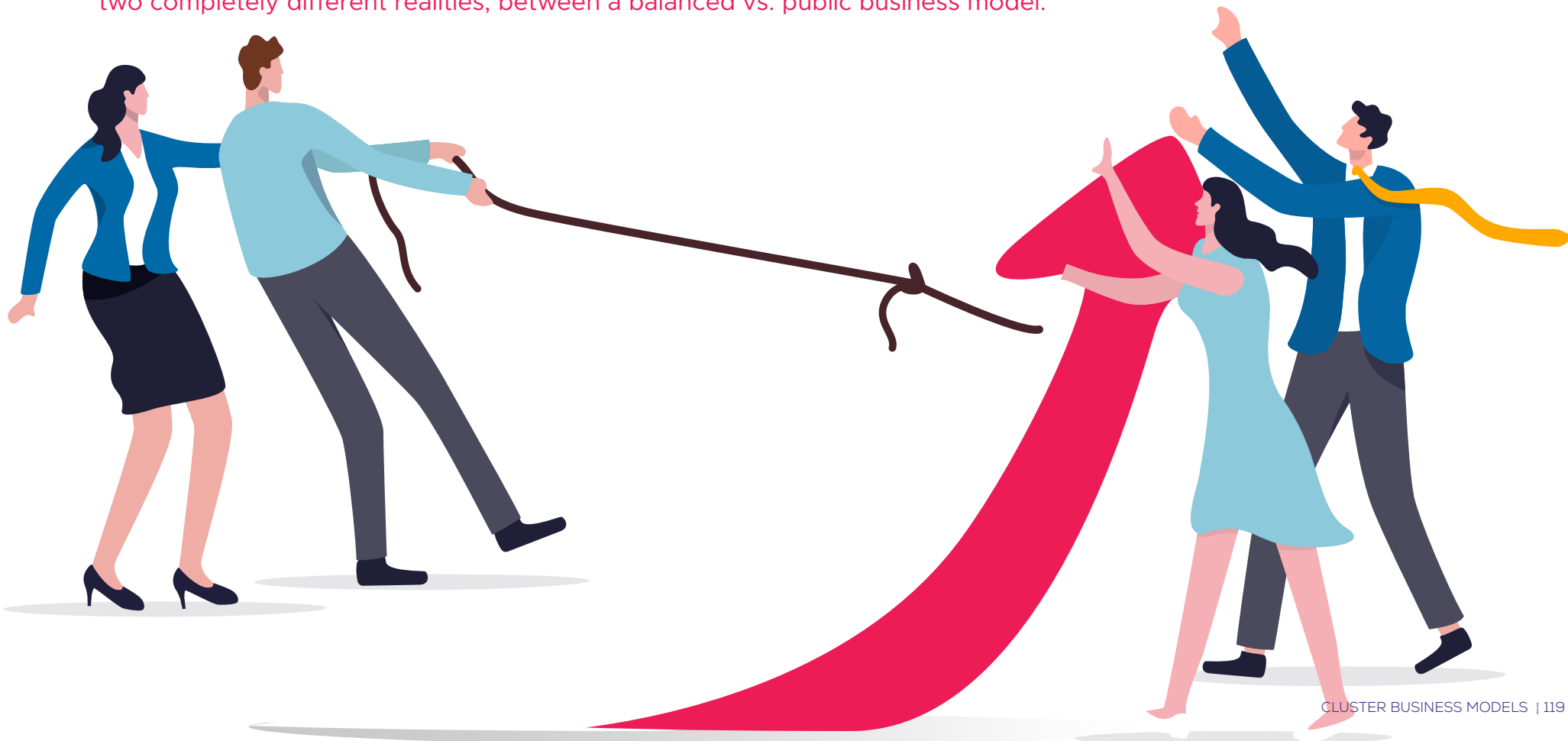
The board should be focused on the business model - I think it should be a continuous focus and revision on the business model to make sure they are staying up to date with the surroundings and the needs of their members - I think the board is equally responsible for this as the cluster CEO.

How should the board think about business model innovation and risk?

For clusters to succeed; the board needs to be both responsible and secure the clusters sustainable financing; at the same time, it is important for them to take on risks and grow - even in very uncertain surroundings. The board must be willing, enthusiastic, yes even supportive of the cluster management when they want to grow into new business areas to further develop the cluster.

What are some of the things you have seen in this space?

In our experience - this is where we see the biggest difference - in mature clusters, the ones that have a board that are both responsible and willing to explore the private side of business model innovation. They achieve much more than clusters where the boards are still focused on how to get more public funding. It is really two completely different realities, between a balanced vs. public business model.





Are there any great role models others could learn from?

NCE Maritime Cleantech Cluster; this cluster is ten years old next month, in their last year with public funding. The cluster is growing and remains very focused on the cluster's strategic goals. The cluster is growing in both employees, members, and countries where they have strong relationships. The board is doing a very good job of this in the NCE Maritime Cleantech cluster.

One of their strongest assets is that the board has been, from day 1, very focused on the main goal - to make green maritime transport. They have been building the cluster with the big picture in mind paired with clear goals.

They really know their members very well; they have a very good overview which makes them able to deliver value to each member. They have a very visionary leader; they have a good handful of employees; they're not finished with this business model, but have been working in this for a few years - raising private funding every year - they have grown a cash reserve. They have really close dialogue with a lot of their members and always eager to know what is really valuable to their members at any given time.

In my view, the critical piece has always been when management has made suggestions - the board has always been supportive.

What are some not-so-good-examples you see?

Clusters that are really passive; the more public funding they get, the more they expect. They put the responsibility for business model evolution somewhere else. This is not going to create a long-term successful innovation cluster.

Any closing recommendations to cluster boards around the world on this topic?

My final recommendation to cluster boards, be more proactive.



shaping business model innovation in latin america: perspectives from the ground



Roberto Chaverri,
Partner
Engage // Innovate Latin America

Clusters in South America

Governments in Colombia, Guatemala, Costa Rica, Chile or Argentina, to name a few examples, have explored and designed national cluster policies and programs with three objectives in mind: 1) to promote traditional and heritage sectors such as agriculture, tourism or manufacturing, 2) to promote the development of regions with significant lags in terms of employment, productivity and human development, and 3) to drive SMEs growth behind their integration into national or international value chains.

Out of these objectives, two predominant models of cluster development have emerged: 1) promoted and funded by chambers of commerce and 2) as initiatives to strengthen specific sectors, especially those linked to manufacturing (known in Spanish as “maquilas”), where funding is based on membership fees and limited local government funds. Colombia is a good example of the first model, while Mexico of the second.

The question that arises is whether these models are sufficiently robust and consistent over time to ensure the cluster’s sustainability and create a material impact across the economy.

The Innovation Riddle

Latin America’s ability to generate innovation at a systemic level has been very limited. The lack of adequate inter-institutional coordination, the obstacles to attracting venture capital investment and the absence of a culture of promotion and training of entrepreneurs are three important obstacles that need to be solved.

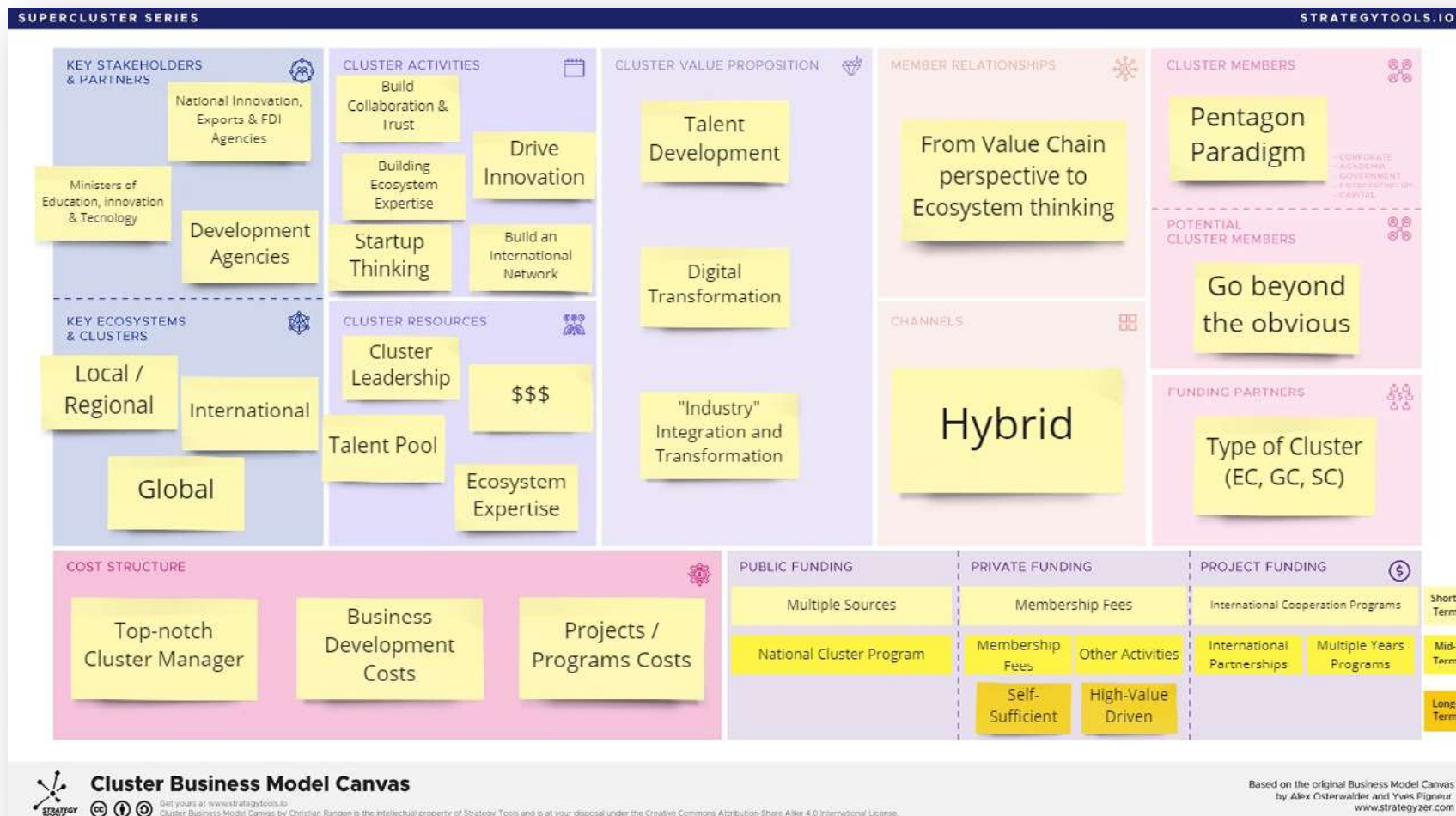
As disruptive technologies have emerged and developed, economic actors need to shift from a linear value chain model to an ecosystem one where different degrees of integration and value creation drivers can be found. This new context implies that the logic under which national cluster programs are conceptualized and cluster initiatives are built must evolve.

For Latin America, this new model represents a big shift from the embedded notion of clusters as an agglomeration of industry players organized behind a triple helix model. Switching to an ecosystem value logic challenges our understanding of clusters. At the same time they can become a mechanism to create and develop ecosystems where companies, entrepreneurs, capital, academia, and the public sector collaborate and lay the foundations of new ecosystem models that can be scaled at the national level.

A Cluster Business Model Blueprint for Latin America

When I think of business models, I think of building blocks, patterns, starting points, connections, systems, iterations, evolution and re invention. So, when Christian Rangen showed me the Cluster Business Model Canvas, I realized that this interpretation of Alex Osterwalder and Yves Pigneur’s Business Model Canvas, was a brilliant way to map out a blueprint for cluster builders and shapers to design what I call high-value innovation-driven clusters and superclusters.

In the following pages, I will present what I believe are some key components of a winning cluster business model. Even though, the principles behind this business model framework are universal and can be applied to any country or geography, this blueprint has been put together considering Latin America’s specific context.



Membership and Funding Partners

1. **Members.** There are two key principles behind this building block: 1) shifting from the traditional triple helix thinking to the “pentagon” paradigm. High-value innovation-driven clusters and superclusters need to add two key players to the traditional triple helix model: entrepreneurs and capital. The former are key drivers of innovation, whilst the latter are key enablers of large-scale ecosystems. 2) Go beyond the obvious. As industries evolve into complex and integrated ecosystems, cluster designers need to think with a broader perspective when mapping its cluster member configuration. A good starting point is understanding how current and future value is created within the cluster’s theme or competitive space.
2. **Funding Partners.** Whether an Emerging Cluster, a Growth Cluster, an Innovation Supercluster or a baby cluster, most clusters will look for a combination of funding sources, being public, private or project based the three most common. Consider the cluster size, stage, configuration, and strategy to categorize your cluster; think accordingly when mapping your potential funding partners.

Member Relationship

Collaboration is intrinsic to successful clusters, and it should always be the guiding principle behind how cluster members relate and interact among each other. Nevertheless, how those relationships are built and fostered can change from cluster to cluster. Clusters in Latin America need to make sure that these relationships are built under an ecosystem logic instead of under a value chain one. Ecosystem thinking focuses on multilevel relationships, while value chain logic tends to be linear and promotes power concentration.

Channels

COVID-19 has forced us to preserve and build relationships in the digital space. Geographic constraints are less dominant. We are truly becoming a global “village”. For Latin America, it represents a great opportunity to build clusters beyond the traditional geographical proximity notion. A hybrid model that combines in-person and digital interactions, communications, learning and workflows, can be used as a growth accelerator and as an integrator to find synergies at a regional level.

Cluster Value Proposition

Within the context of innovation-driven clusters and superclusters in Latin America, value propositions should be thought around three key elements:

- 1. Talent development.** Human talent is the cornerstone of competitiveness and development. Clusters should act as a force to transform Latin America's educational system as well as a platform to build new human capital capabilities.
- 2. Digital transformation.** Either thinking of technology as its core theme, as a key enabler or as a cluster building block, digital technologies need to be a core component of a cluster's value proposition. Transforming existing traditional industries or developing new ones require a digital transformation mentality and skillset. Otherwise, clusters will be perpetuating low-value economic models.
- 3. Industry integration and transformation.** Most of Latin American economies are still based in commodities production and low-value manufacturing. Clusters should be a platform to drive industry transformation and integration into large-scale international global ecosystems.



Cluster Activities

There are five key activities that I propose Latin American clusters should focus on to succeed:

- 1. Build Collaboration and trust.** That is a tall order in the region. Our culture is simply not built under the principle of community, but rather under the survival of the individual. Thus, building collaboration and trust will remain the No. 1, 2 and 3 activity for a cluster to succeed.
- 2. Build Ecosystems.** Clusters should balance how they advance in the “domain knowledge” as well as in the “ecosystem building knowledge”. National Cluster Programs play a key role in the latter.
- 3. Drive Innovation.** the WIPO Global Innovation Index and the Global Competitiveness Index expose the region’s inability to drive innovation at a system level. Latin American clusters and innovation superclusters must think of innovation as a core activity to achieve long-term impact.
- 4. Startup Thinking.** Scarce resources are going to be the norm. Clusters need to have a “startup mentality”; “do more with less” and act with agility and speed. This is why founders of startups and ecosystem builders need to have a seat on the cluster’s board.
- 5. Build an International Network.** Clusters need to focus on building the internal network as much as building an international network. Clusters are all about collaboration. The growing trend of clusters partnering and collaborating with other clusters from all over the world will become the norm.

Cluster Resources

Linked to the cluster activities, a massive shift on how clusters understand what their key resources are and how to acquire them is required.

- 1. Cluster Leadership.** If I had to choose the most single important element of the proposed Cluster Business Model blueprint for Latin America, I will go with “Cluster Leadership”. A visionary leader, whether it is a cluster board member, or the cluster CEO / Manager can make a huge difference.
- 2. Ecosystem Expertise.** Go beyond the “domain expertise”. That’s the “easy part”. The missing link is the “ecosystem and cluster building” expertise. Clusters need to develop a high level of expertise in these two dimensions. Deep ecosystem and cluster building knowledge should be an imperative for Latin American. Look for key partners with such knowledge to accelerate the learning curve and learn best practices.
- 3. Funds.** Running out of money is among the top reasons why clusters fail. I will expand more on this in the Funding section.
- 4. Talent Pool.** This resource can be understood in two dimensions. One, the talent pool within the competitive field the cluster is focused on. The other, the talent pool available for clusters to source their staff. Programs such as CAP – a European Cluster Accelerator Program, or Strategy Tools online [Global Cluster Leadership Program](#), are good examples on how to develop talent. Solid National Cluster Programs have a big role to play.

Key Stakeholders & Partners

If we consider how much Latin American countries have fallen behind in terms of education, innovation and access to technology, there are three types of players that I find critical in supporting clusters:

- 1. Ministers of Education, Innovation and Technology.** New education and innovation models must be put in place and access to technology must be guaranteed. Otherwise, it will be hard to drive long-term economic and social growth.
- 2. Innovation, Exports and FDI Promotion Agencies.** Costa Rica has proven how to structure public-private partnerships to support exports and attracting Foreign Direct Investment. The missing link for Costa Rica is an innovation agency capable of driving innovation at a system level. Look for alignment among the three of them.
- 3. Development and Cooperation Agencies.** Latin America lacks the resources or the ability to use the available ones in an articulated and productive way. Development and cooperation agencies, such as the IDB, BCIE, GIZ or JICA are strategic for getting National Cluster Programs and cluster initiatives off the ground. Their technical expertise and financial resources are strategic in the early days. Go beyond funding.

Key Ecosystems & Partners

Covid-19 has forcefully pushed the world to the digital space, allowing us to build new relationships and wipe out geographic barriers. Latin American clusters can leapfrog the domain and ecosystem expertise learning curve by connecting early on with different types of ecosystems and clusters.

Think local/regional to find synergies and learn faster. Think international to aggregate supply and demand.

Think global to boost competitiveness and growth.



Funding

Latin American high-value innovation-driven clusters and superclusters should think of funding, not only in terms of the source, but also in terms of time. Eric Ries, author of *The Lean Startup* best-seller says: “think big, start small and scale fast”. Clusters should follow this mantra.

Using the Business Model Evolution Map by Strategy Tools, clusters should chart their long-term funding strategy. Kickstarting the cluster (short-term) with a mix of public funding from multiple sources or different government programs, membership fees and/or international cooperation programs, make sense. In my view, there are some traps relying on only one source. For example, membership fees might be insufficient or might create an undesired power imbalance among cluster members; bigger players paying higher fees might end up having too much power, making it less attractive for entrepreneurs to join.

This funding model should evolve in time, and while I suggest diversifying the private funding sources, I also suggest that public funding should be concentrated under one single source managed by the National Cluster Program. Also, clusters should structure project funding under a “partnership” model instead of just a “transactional” one; they should explore multiyear programs to ensure continuity and long-term thinking. Finally, Latin American clusters and superclusters should aspire to develop a self-sufficient funding business model. Such an aspiration will prompt clusters to think more outside-the-box (very cliché, but very true), explore more innovative business models and focus on high-value driven activities.

Cost Structure

Instead of laying out a detailed cost structure, I will highlight three costs components that need to be thought about carefully:

- 1. Top-notch cluster CEO or Manager.** She or he should be the rainmaker. Pay upfront for network, talent, and leadership.
- 2. Business Development.** whether raising funds, recruiting members, ensuring market access, developing its long-term self-sufficient business model or building an international network, clusters need to understand and track how much they are spending on short and long-term value creation.
- 3. Projects / Programs Costs.** clusters should look at how much they are investing in projects and programs, especially relatively to overhead costs.








Final Thoughts


Alex Osterwalder and Yves Pigneur's work on business models has taught the importance of understanding business model patterns and ensuring all elements of the 9 building blocks (11 in this case) are cohesively connected.

On the other hand, Christian Rangen's work on clusters and innovation superclusters have provided the most comprehensive framework available on how to build clusters capable of driving long-term value and economic transformation.



Building on this vast expertise, my goal is to provide cluster shapers and managers, especially in Latin America, with a blueprint of the key components that should be considered when designing the business model of a high-value innovation-driven cluster or supercluster.

The race for economic growth in the economy 4.0 is on, and Latin America has a lot of catching up to do. A good first step is building winning cluster business models.





**In the Caribbean,
certain clusters
are funded by
the United Nations.**



part six:
case studies -
how we did it

five case studies

Working with the global community, we have had a chance to connect, discuss, learn and really get into the wide variety of cluster business models around the world.

In the next section, five cluster leaders, from Mexico, Spain, the Netherlands, Slovenia and Australia, share their unique cluster business model and their own experiences shaping both cluster strategy and business models over the years.



Monterrey
Aerocluster

HealthValley
Netherlands

Mi4
MetalIndustry4

SGGGS
SLOVENSKI OPAVNEB GRUPO
CONSTRUCTION CLUSTER OF SLOVENIA

QUEENSLAND
ROBOTICS



case study

Queensland Robotics' cluster business model development



Andrew Scott
Executive Chairman
Queensland Robotics Cluster
Australia



About the Queensland Robotics Cluster

Queensland Robotics launched in 2019, formed by a network of robotics companies in the Queensland.

We bring builders, adventurers, and big thinking innovators together to launch Made-In-Australia solutions on the world stage. Our members are passionate about great robotics, great projects, and great endeavours. Queensland Robotics is building the robotics industry in Australia to contribute significantly not just within Australia, but globally.

It is the role of Queensland Robotics to innovate and commercialise Australian robotics technologies. Our mandate is to create and advance opportunities for our industry-leaders, experts, entrepreneurs, start-ups, educators, government, and innovators to work together — the best people on the best projects.

Queensland Robotics is an industry-led organisation established to support emerging industrial robotics capability in solving real challenges across sectors including mining, agriculture, logistics, oil and gas, construction, manufacturing, forestry, transport, defence and space.

The Queensland Robotics Cluster Strategy in 3 Points

Establishing the foundations: to build confidence, capability, capacity and connections within the cluster

Accelerated growth: Leverage key relationships within the state, nationally and internationally to grow the cluster and companies with in, providing opportunities for jobs, revenue, commercialisation

Sustainable global market position: Promote “Robot Made in Australia” Brand with transparency, ethically endorsing the UN’s Strategic Development Goals

our cluster business model

Queensland Robotics is based on the 30+ years of capability development in the State, founded in the formation of the CSIRO's Robotics division (now part of CSIRO's Data61 division) and one of the first Collaborative Research Centres – CRC Mining which was focused on developing technology for the resource sector.

This catalysed the growth in mechatronics engineering programs at the majority of the universities which continues to grow. Queensland has been the centre for a number of firsts – First port to be automated, First robotic abattoir, First Underground Load Haul Dump automated mining vehicle (commercialised by Elphinstone + Caterpillar). Over the years we have seen growth in the number of small, medium and large companies basing themselves in Queensland.

Our Cluster Model is based on this solid foundation and the opportunities this depth provides, along with the recognition of broader growth and development of related ecosystems and capabilities as Australia works towards recovering from COVID-19 and increased resilience to future challenges. It is also based on the key needs of the cluster, which is to build confidence, connections, capability and capacity.

CONTINUED ON NEXT PAGE

Most clusters have a paid membership model to provide some of the necessary funding for a cluster organisation to function, we have deliberately chosen not to have a paid membership model (as we have a lot of organisations who operate on a membership model which has resulted in a flooded membership based ecosystem).

We provide each member company a share in the cluster organisation with the option to purchase additional shares. These shares will pay an annual dividend from any surplus assets not re-invested into cluster programs and activities. This provides a formal way for the cluster members to have ownership in the cluster with a voice at the table for strategic planning and execution.

Other funding sources include combination of public and private sources along with project funding and capital sourcing.

Another key opportunity we are realising is cluster to cluster relationships which has also been highlighted by the TCI Network.

We are still early days in the development, however the intangible benefits are being realised almost immediately, these include connections, referrals and exploration of new business opportunities.

An important component of success of these cluster to cluster relationships is persistent communication and interaction at an organisation level and members level – member companies have to interact with each other.

Our key challenges is bandwidth of the members of the organisation and the fact that all of our member companies have become overwhelmed with interest with the realisation that Robotics and automation can help with business continuity and productivity improvements (thank you COVID). The other key challenge is changing the assumed narrative to the reality: Robots = “Lots of Jobs”

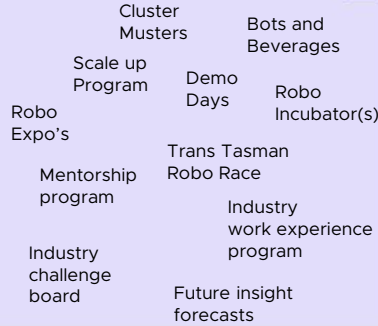
KEY STAKEHOLDERS & PARTNERS

- Robotics Australia Group and Network
- Bionics Queensland
- Food and Agribusiness Network (FAN)
- Regional Development Australia
- Trade Investment Queensland
- State Government/Advance Queensland
- Industry Growth Centres (METS Ignited, NERA, FIAL, AMGC, AustCyber, MTConnect)
- Queensland University of Technology (QUT)
- Sunshine Coast University
- Central Queensland University
- University of Queensland
- Griffith University
- Southern Queensland University
- CSIRO / Data61
- Australian Remote Operations for Space and Earth (AROSE)

KEY ECOSYSTEMS & CLUSTERS

- Food and Agribusiness Network (FAN)
- Hydrogen Queensland (H2Q),
- Bionics Queensland,
- Immersive Technologies (XR Hub),
- Queensland AI Hub,
- Advanced Robotics for Manufacturing (ARM Hub),
- Robocoast
- RoboWest (Western Australia Robotics Cluster)
- Resource Centre of Excellence
- Resource Industry Network
- Innovation hubs and co-working spaces (SplitSpace, Arcspace, Toowoomba startup, Peregrin Digital Hub)
- International Clusters: Silicon Valley Robotics (SVR), Odense Robotics, RoboValley, MassRobotics, Pittsburgh Technology Council,

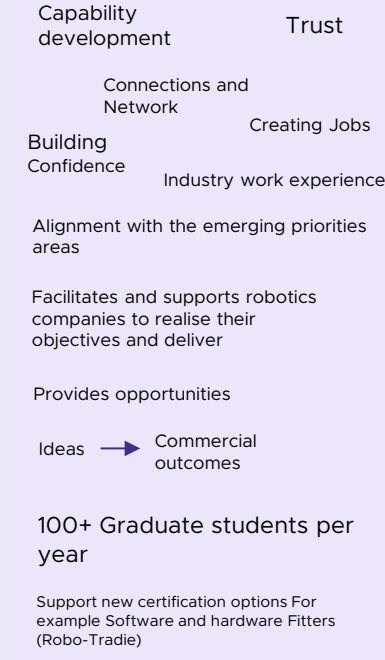
CLUSTER ACTIVITIES



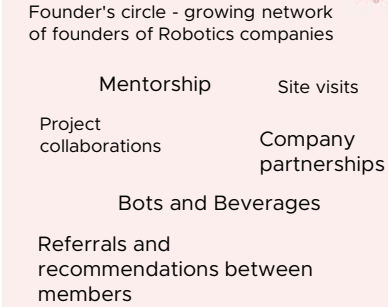
CLUSTER RESOURCES

- Relationships / network
- Component Library
- Knowledge base (case studies and references)
- experience (mentors)
- Research capability (both academic and private)
- Testing and demonstration areas
- Product development resources

CLUSTER VALUE PROPOSITION



MEMBER RELATIONSHIPS



CHANNELS

- Austrade + Austindustry
- Trade Investment Queensland
- International Cluster partnerships / relationships (SVR)
- National, regional and Local cluster partnership / relationships
- Website and mighty networks
- Conference engagements (TCI, IEEE, iROS etc)
- Corporate partnerships (BHP, Rio Tinto)National
- Growth Centres: METS Ignited, NERA, FIAL, AMGC, AustCyber, MTConnect
- Robotics Australia Network

CLUSTER MEMBERS

Startups + Scaleups + Entrepreneurs: Artemis, Universal Field Robotics, Australian Droid Robot, BIA5, LYRO, Presien, Swarmfarm, Skygrow, Cyborg, R4 Robotics, Coreomatics, Skyborne Tech, Haddington Dynamics, Micromelon, Freelance Robotics, Macrobotics, Sensaweb, Surfbee, Symbiotic Innovations, WattsNet, Imvelo, Dotteral, Copperstone, Rocos, Built Robotics
 Corporate: Euclidean, Boeing, Dorabot, Omron, BOSCH, PFP Robotics, AWS, BHP, Rio Tinto, Imdex, Nova Systems, Aurecon, Smartech
 Academia / Research: QUT, UQ, CQU, Griffith, SCU, CSIRO/Data61, RMIT, TAFE Qld
 Government: Queensland Government, METS Ignited, NERA, FIAL, AMGC
 Capital: 77 Partners, VCI, Bricks and Mortar

POTENTIAL CLUSTER MEMBERS

Startups + Scaleups + Entrepreneurs: Oxbotica, Otherlabs and many others we have not discovered yet
 Corporate: Worely, Anglo American, Newcrest, Ocado, Google, CIMIC, Thiess, Toyota, Coles, Woolworths, Bunnings,
 Academia / Research: Southern Queensland, Bond UTS, Sydney, Monash, 3AI,
 Capital: Main Sequence Ventures, Artesian, Tenacious Ventures, Blackbird Ventures, HAX, Chrysalix Venture Capital,
 Government: State, Federal, Regional, Australian Space Agency, Industry Growth Centres (Austcyber, MTConnect)

FUNDING PARTNERS

- METS Ignited
- Symbiotic Innovations
- Euclidean
- 77 Partners
- Deloitte

COST STRUCTURE

- Resources (Management team, engagement services, Business development, grant writing, funding, mentoring and support)
- Facilities rent (workshop and lab space)
- Communications
- Membership fees to other networks and organisations (EDA, TCI, SVR, other clusters, hubs, Industry associations)
- Subscriptions (Market data, technical library material, training material)
- Opportunity fund
- Competitions and challenges
- Incubation and acceleration operational costs
- Parts and component library

PUBLIC FUNDING

- Accelerator Programs
- Local government project funding
- Local government resources
- State Government grants
- Federal Government grants
- Incubator support program
- Jobkeeper / JobSeeker funding

PRIVATE FUNDING

- Events and sponsorship
- Venture capital Fund
- Capital fundraising % fee
- Office / Workshop / Lab rent
- Digital platform
- Share program

PROJECT FUNDING

- National Government project funding - Collaborative Research Centre projects
- Member funded joint projects
- International project funding
- Lab and testing facilities



Cluster Business Model Canvas

Get yours at www.strategytools.io
 Cluster Business Model Canvas by Christian Rangen is the intellectual property of Strategy Tools and is at your disposal under the Creative Commons Attribution-Share Alike 4.0 International License.

Based on the original Business Model Canvas by Alex Osterwalder and Yves Pigneur. www.strategyzer.com

The Future of Our Cluster Business Model

We see the global landscape changing thanks to COVID-19 and the internal retrospection it has caused us personally, at a company level, at an organisation level and at all levels of government. As a result we see the need to be adaptable and be ready to make the necessary changes to our business model. We know there are going to be new services required, new approaches to growth and sustainability, different education models required and support frameworks.

We are only just starting and still consider ourselves a baby cluster in the evolution of clusters and understand the amount of work required. 2021 is our year to complete the foundation framework and brand, establish the pathways for growth for any size of company within the cluster.

We aim to demonstrate some key cluster to cluster partnership projects and programs to help the growth within the broader ecosystem. With the formation of the national Robotics Australia Group and Network we see the potential to realise a Robotics supercluster aligned with the Australian federal Manufacturing Modernisation Investment strategy to grow robotics manufacturing, services and expertise contributing significantly to the Australian economy

We have not changed the business model significantly due to COVID, rather COVID has provided more emphasis and importance for members of the cluster to collaboration and work together to realise the opportunities.

It will be important to continually review and adapt accordingly on a regular basis. We are still experimenting, learning and evolving our understanding of what works and what does not work, what we need to do and what we should not do, what is sustainable and what is not, what adds value and what does not.

We see a future where deeper relationships, partnerships, joint ventures between clusters nationally and internationally. These relationships will be of mutual benefit to all involved.

We see a future where Robotics is recognised as an industry, one that is key to supporting other emerging industries.

We see a future where international borders are no longer a barrier for collaboration, knowledge exchange, sharing or experience.

We see a future where there is a greater understanding of the economic development opportunities for robotics and advanced technologies and that they can be achieved ethically, socially and environmentally responsibly.

We see a bright and exciting future.



recommendation to other cluster managers



1. PERSISTENCE

Persistence is key to cluster development, Never give up, it will be the biggest roller-coaster you have ever been on, so when you are feeling that you are in a dip, a low, a trough, push through and you will realise the highs, the peaks, the opportunities. Be persistent with your communication, be relentless with your empathy, nurture the relationships continuously. Be persistent in looking after yourself , it is very easy to burn out with cluster development if you are not careful.



2. ENGAGEMENT & TRUST

Clusters are all about engagement, get out and meet with your stakeholders regularly, develop personal relationships with your members. Clusters are built on trust, building trust is a hands on exercise. Engage with the purpose to realise positive experiences, both for yourself (to keep you motivated) and for the members (to the point that they want more). Engagement can take many forms so experiment with different styles and approaches to see what works.



3. ITERATE

Experimentation is key innovation and ecosystem development, however it is important to iterate consistently, learn from the experiment, understand what the objective is and understand the outcome. Just because something didn't work the first time, try again with adjustments or adaptation. Iterate activities that work and continually monitor for any changes. Iterate opportunities for collisions of ideas, opportunities and members, this helps to build community.





case study

adding value for partners and getting more return on it than expected



Victor Haze,
International Ecosystem Director
HealthValley, The Netherlands
LSH Cluster



About the Health Valley Netherlands Cluster

Founded in 2006. Pure economic program from the start, later traditional triple helix. The cluster focuses on 3 primary points; innovation advancement, partnership & matchmaking and projects. The areas of economic activity are medical devices & robotics, personalized medicine and digital health. We are located in Nijmegen, but have a national presence in partnerships. The cluster consists of some 200 partners from education, entrepreneurs, healthcare organizations and government.

Over the past years we have been partner in a number of EU funded projects. Internationally we are well connected in Europe and beyond.

Pre-Covid we held some 30 events for partners for matchmaking and project partnerships. Every year in March we organize the largest LSH event in the Netherlands; Health Valley Event. It welcomes between 1200 and 1400 participants. In 2021 it will edition #12. Fully online and digital in 2 days. The team is 8 FTE; organizational, cluster management & communication.

The Health Valley Cluster Strategy in 3 Points

- 1. Connect**
- 2. Inspire**
- 3. Facilitate**

Our Cluster Business Model

Health Valley Netherlands is a traditional Triple Helix cluster organization. We were founded in 2006 coming from an economical support project into a foundation for healthcare innovation. With three major 'founding fathers' from government, education and corporate.

Since 2006 we have grown to an independent foundation where we have over 200 partners coming from different areas in Life Sciences & Health (LSH) industry and ecosystem.

We organize ourselves around the areas of Medical Devices & Robotics, Personalized Medicine and Digital Health. Based on the Novio Tech Campus with some 60 other companies around these themes we have a strong connection to the Nijmegen-Arnhem region but the partners are coming from a regional and national level.

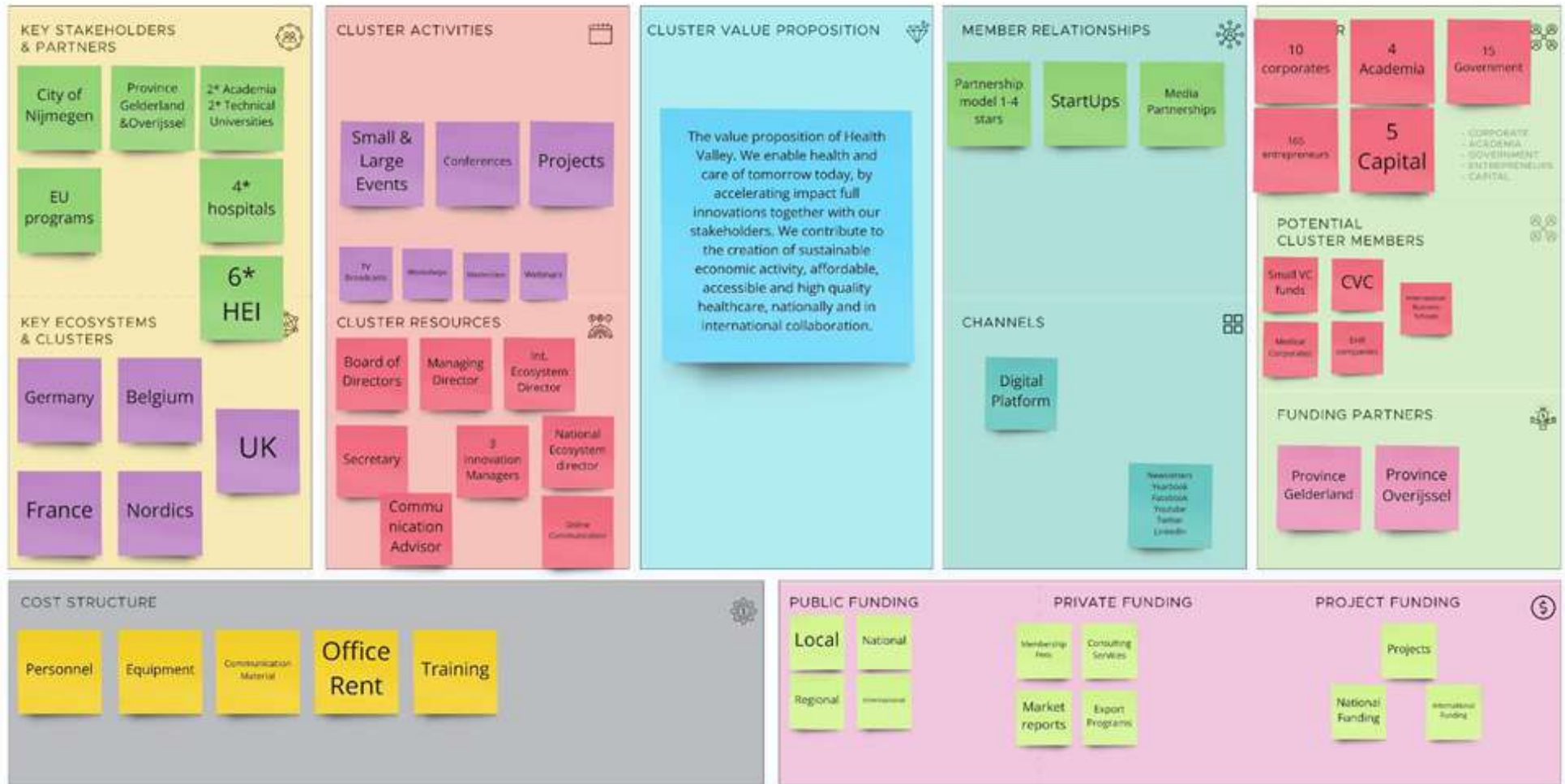
The Health Valley network consists of a combination of entrepreneurs (corporate, scale-up and start-ups), educational institutions (Universities and Applied Sciences), government and HCOs. Furthermore we have some other NGOs like network and other cluster combinations.

Our funding, a mix of public money coming from the provincial government (and EU) and private money, is from 90-10% some 10 years ago going to 40-60% in the years to come.

This reshuffling of PPP funding triggered HV to have a serious look at its partnership model. We found an imbalance in the price asked and the services offered. The price level left too much room for non-engagement of our partners. In basis; we did not ask much, so we did not receive much. In other words; the value perceived by the partners did not reflect the value inherent in the network.

We changed the partnership fee structure for all the 4 types of partnership significantly 3 years ago.

Besides the partnership fee as income source, we also have possibilities in organizing events / webinars / roundtable discussions or trips visiting interesting networks abroad. With Covid and lockdown this all changed dramatically towards online. So we now hold more online meetings, webinars and even have a series of TV shows produced in preparation for the Health Valley Event in March 2021.



Cluster Business Model Canvas

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The Future of Our Cluster Business Model

After we changed our partnership model, we expected some loss of partnership numbers due to the higher price range. But we received something in return that we initially did not expect or could foresee. Much more engagement.

Based on the higher price for partnership, partners perceived a higher value from that partnership and started to become more involved in the network. E.g. they voiced the expectation that they would receive more from the model and the activities per level.

We flipped from a flat fee model to a progressive FTE sized model for 4 different-sized organizations. It was a significant change as the fee structure for the largest corporations became a tenfold increase. Were they willing to pay this increase?

We can only declare this as some sort of 'value perceived for partnership fee paid' . And we believe that to some extent this is a viable way of motivating your partners in a feeling of more actively being engaged.

What we have learned from this is to be more precise in filling certain specific expectations from the different parties in the network. But enabling a more user centred approach of the different offerings will definitely be a focal point in the coming years. We can add more value and ask a higher price for that.

What are our partners looking for? How do we best serve them value for their partnership fee?

What are some of the possible engagements companies are willing to partner for? And have a high value assessment to be willing to have HV organize it for them? I am thinking along the lines of customized 'events' online for them. Organizing engaging meetings is an art. Our HVE have proven this for the last 10 years. If we are able to transcend that craft to an online platform, I am confident that a partner is willing to pay a nice premium for this service.

recommendation to other cluster managers



1. CONNECT

Make sure you know who your partners in the network are. What is their ambition? Why are they part of your cluster? We set up partnerships with different accounts in order to deliver a personal approach to each partner in the network. In that way it is possible to give them the value they expect to get from the cluster.



2. LEARN

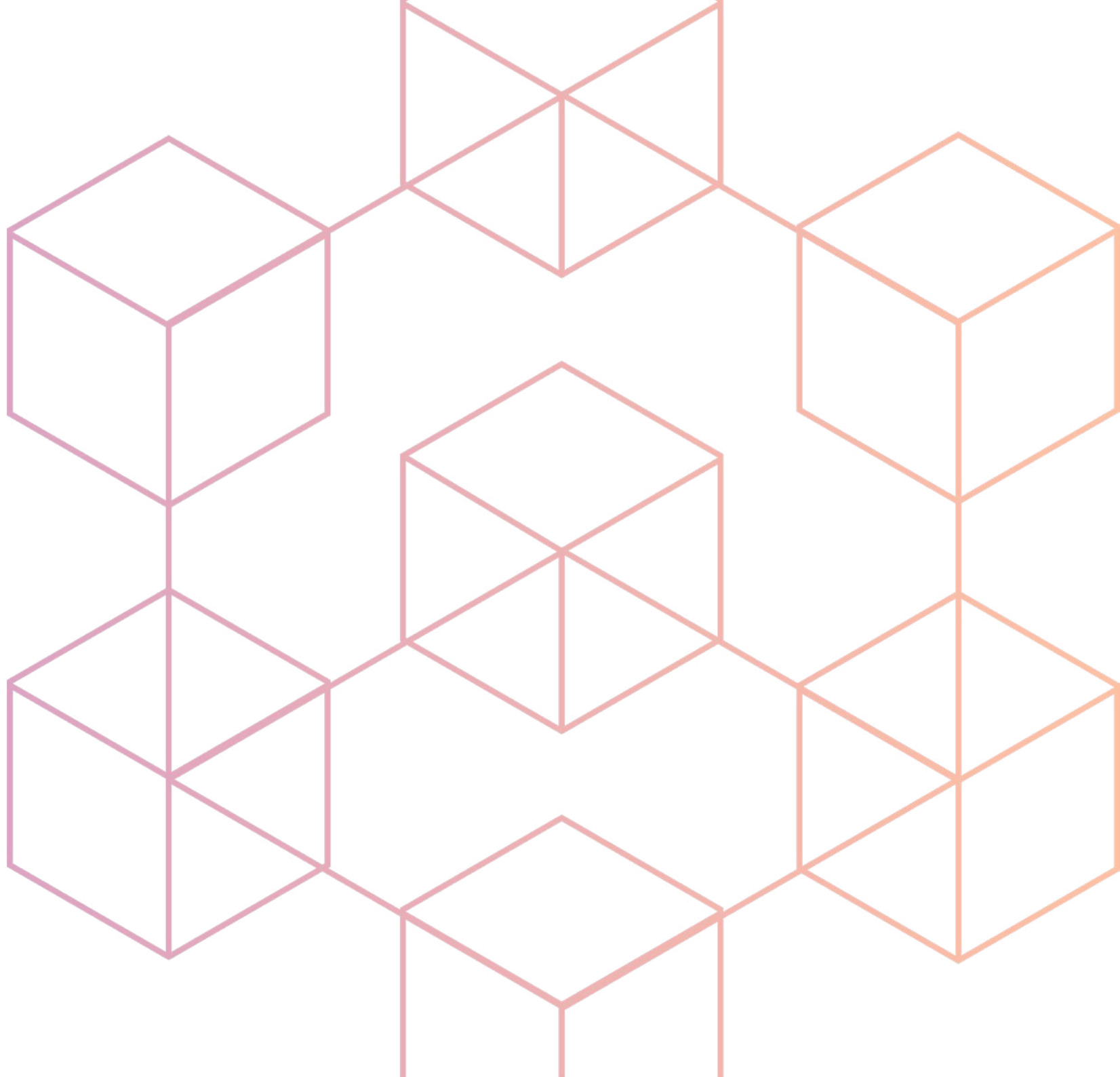
Make sure you learn from other cluster manager organisations like TCI, ECCP or Strategy Tools in communities they have set up.



3. SHARE

Discuss how you started your cluster and what you aim to achieve.





case study

how the Monterrey Aerocluster developed its cluster business model



Claire Barnouin
CEO
Monterrey Aerocluster
Mexico



About the Monterrey Aerocluster

Our Civil Association was founded in 2009 by a handful of local companies, two large universities and the state government of Nuevo León. We gather the main decision makers of the Aerospace Industry, including advanced manufacturing, general aviation and special services companies in the Northeastern region of Mexico. Under this “triple helix” model, the Productive sector, the Education sector and the State Government jointly decide on the agenda, goals and initiatives that the Aerocluster should pursue.

We represent close to 50 members: from start-ups, SMEs, to large companies, national and foreign, manufacturers, specialized services providers, product and solution distributors, aircraft repair and maintenance workshops, research and technological development centers, inspection labs, technical schools and universities, as well as public entities of our regional government.

Our Mission is to integrate, promote and develop the aerospace and advanced manufacturing sector of Northeastern Mexico through collaborative projects that generate high added value solutions for our stakeholders.

We aim at becoming the model organization for cluster development in the aerospace and advanced manufacturing in Mexico.

The Monterrey Aerocluster Cluster Strategy in 3 Points

Develop Talent: Help companies develop skills and capabilities to meet industry quality standards

Industry Projects Collaboration: access to industry projects in a collaborative way, which could not be accessed individually by the cluster members

Industry Development: fill gaps in the value chain of what the region currently produces

Our Cluster Business Model

Our cluster was founded under the triple-helix principle (private companies, academia, and government as the main players) and our business model is built around three main topics: Who is our customer? How do we create value for them? How do we make money?

Currently, in the Monterrey Aerocluster, we aim to attract two main types of members: Private Companies and Manufacturing Service Providers of the Aerospace industry (Northeast of Mexico)

The private companies are mainly integrated by:

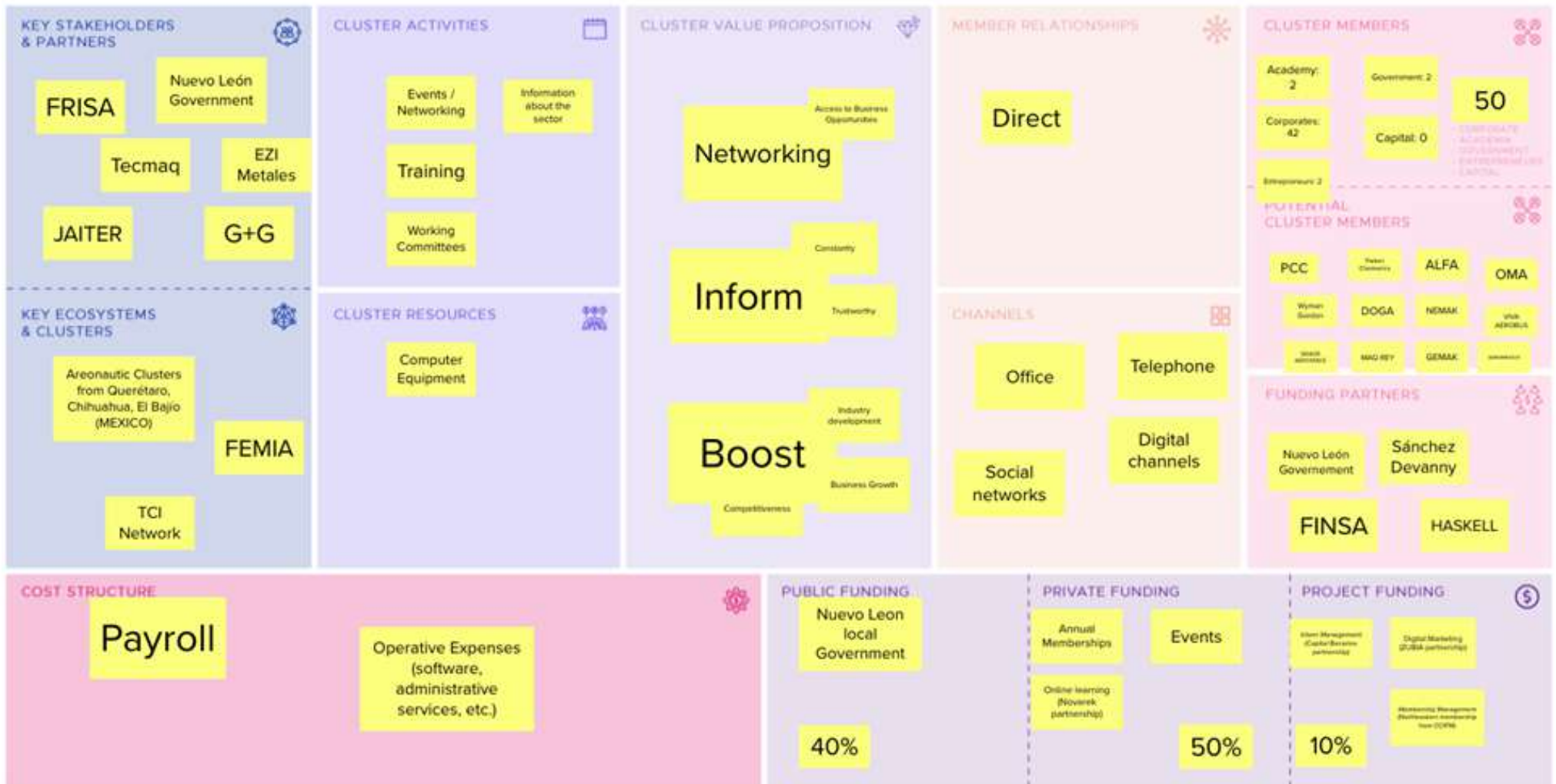
- The Aerospace and Advanced Manufacturing Sector
- Manufacturing Industry Companies from other sectors, that might become new suppliers in the aerospace sector

Our value proposition is built around three main attributes:

- Networking (in order to access business opportunities)
- Access to trustworthy information of the sector
- Play a role to boost the development, competitiveness and growth of the industry

We are part of 13 clusters in the state of Nuevo León that receive support from the local Government, so our revenue formula considers three main sources:

- Public Funding (from Nuevo León Government) that represents around 40% of our annual Budget. This amount can only be used to fund projects (not for operating expenses of the cluster).
- Private funding (Annual memberships, Events, and Training) that represent around 50% of the Budget.
- Projects (Intern Management, Digital Marketing, Membership Management from partnerships that we've built) that represent 10% of our budget.



Cluster Business Model Canvas

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The Future of Our Cluster Business Model

The current environment has changed our operating assumptions and what we think our customers value. We believe that some of the new behaviors will maintain (for instance, we're currently migrating our most successful trainings to an online format), so we think our current Cluster Business Model will continue being valid, but we also foresee three main changes in our Business Model to create more value, and to achieve that, some component are designed in Mexico (not only focused on manufacturing).

First, we would like to attract entrepreneurs and venture capital in order to evolve our cluster (Penta helix). Our focus would continue being private companies, but we would love to explore how to attract entrepreneurs and venture capital.

For that to happen, our value proposition would have to include some of the following elements:

- Incorporate trade missions in order to boost business development
- Develop deeper knowledge on our industry through Market Research / Business Intelligence
- Scouting and Linkage between Startups and Corporations
- Access to venture capital in order to better fund and build scaleups

Our future revenue formula would include some of these ideas:

- Commissions on industry collaborative projects (for identifying, designing and managing them)
- Fees on open innovation (scouting, integration, etc.)
- Fees on venture capital investment
- Fees on Business Intelligence

In order to build this new Cluster Business Model, we need to test our assumptions and validate that this would resonate with our current and future potential customers. It will be challenging, but we would love to take this road.

recommendation to other cluster managers



1. ADOPT A COMMERCIAL MINDSET

Manage the cluster as if it were a company. It needs to be profitable to GROW, otherwise you'll continuously be limited on the options you can explore.



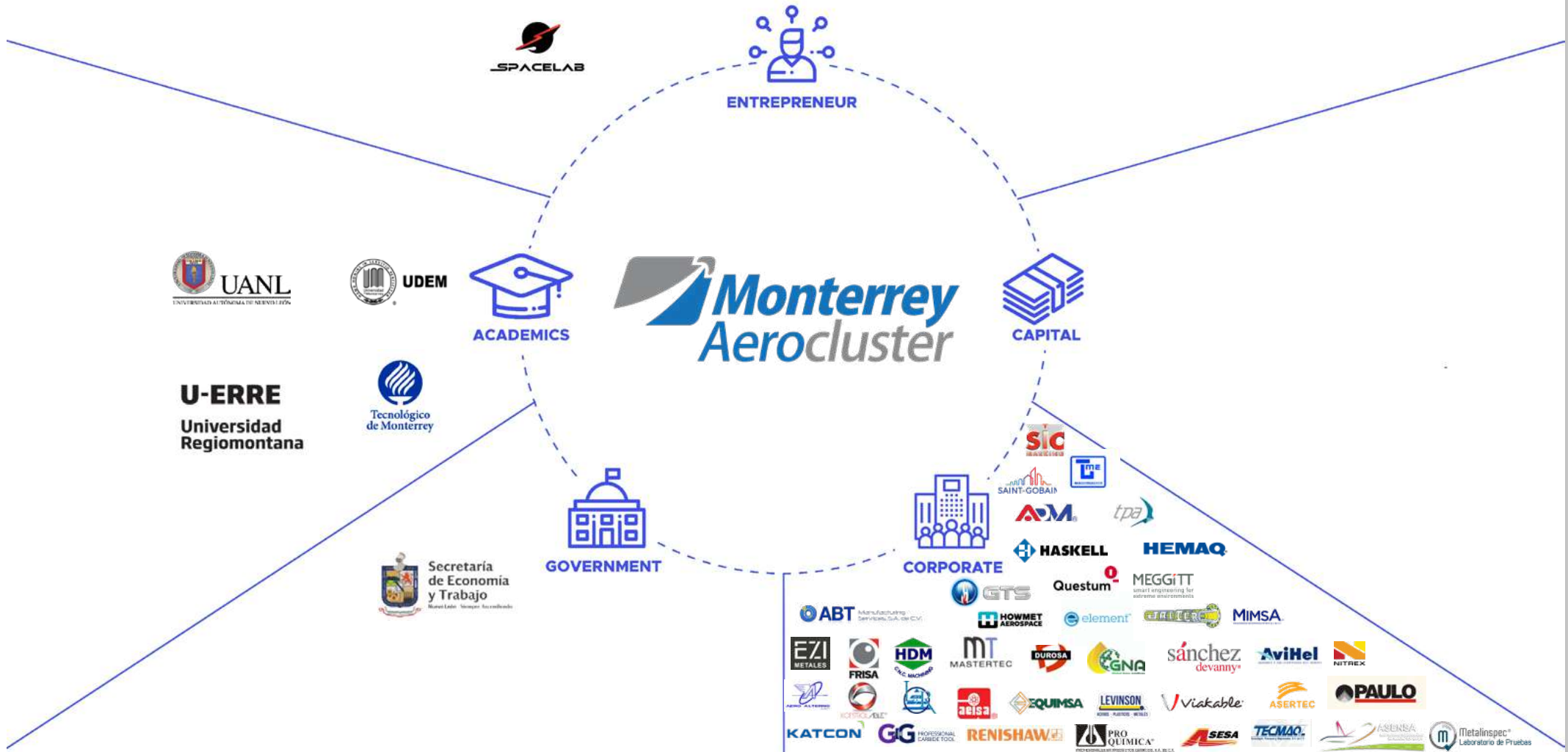
2. CLEAR FOCUS ON WHAT YOU DO

To develop your business model you must understand the needs of your members (what makes them lose sleep). If not, your value offer won't resonate with them and you'll only waste time and resources, and will not meet their expectations.



3. DEVELOP NEW PARTNERSHIPS

Be curious to identify with whom you can generate alliances, quickly and easily, to complement your portfolio of services, in order to develop new Income streams.

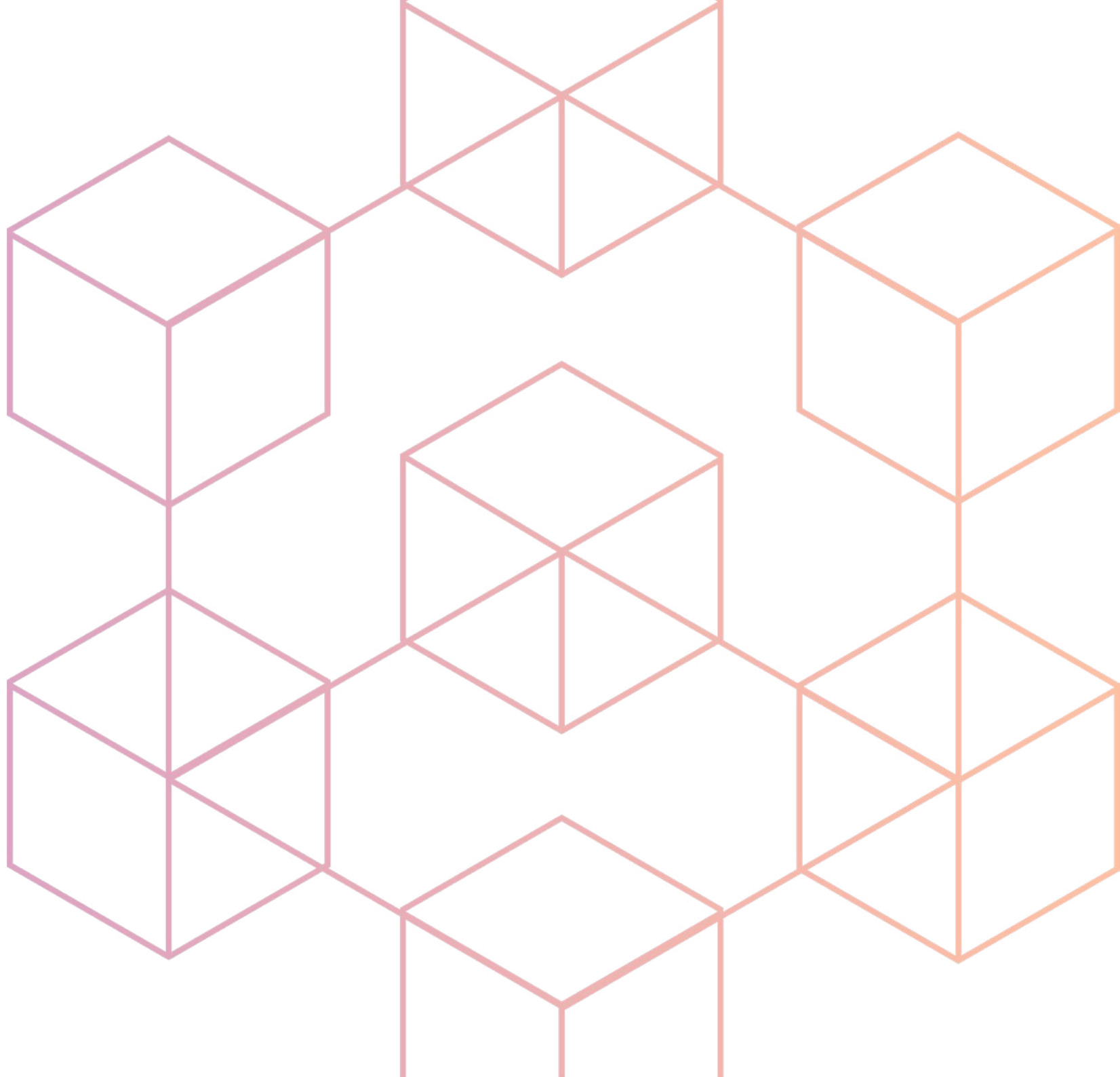


Supercluster: Members



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case study

how MetalIndustry4 developed its cluster business model



Jose Ramón Natal
Cluster Manager at MetalIndustry4
Advanced Manufacturing Cluster of
Metal Industry
Asturias, Spain



About MetalIndustry4

The Advanced Manufacturing Cluster of Metal Industry in Asturias, MetalIndustry4 was born in 2016, as a private initiative, with the main support of the metal industry companies of the region.

MetalIndustry4 is located in Asturias, a northern Spanish region. Asturias comes with a deep-seated industrial culture, a result of its history as a mining and iron and steel works region.

The cluster gathers companies of this industrial tradition with other key companies and organizations such as competence centres, university, logistical and institutional agents, ICT enablers and other business agents related to the sectoral value chain or its priorities as a cluster.

Its 60 members add up more than 1,8K millions of euros in turnover, 1 billion in exports and about 12,000 skilled workers with around 400 people specialized in R&D.

The MetalIndustry4 Cluster Strategy in 3 Points

- 1. Integration in global value chains**
- 2. Collaborative innovation and technological improvement**
- 3. Human capital management**

Our Cluster Business Model

MetalIndustry4 is a cluster organization founded in 2016 by a group of companies and RTOs gathered around the initiative of the Regional Metal Business Association. Its members and activities are concentrated in the region of Asturias.

The mission of the Cluster consists of:

Promoting the competitive improvement of the Asturian metal industry and sectoral ecosystem, facilitating their integration into the main Global Value Chains, improving human and technological resources, and focusing on innovation and cooperation; with a clear orientation towards accelerating the pace of growth in turnover and profitability.

Vision of the Cluster:

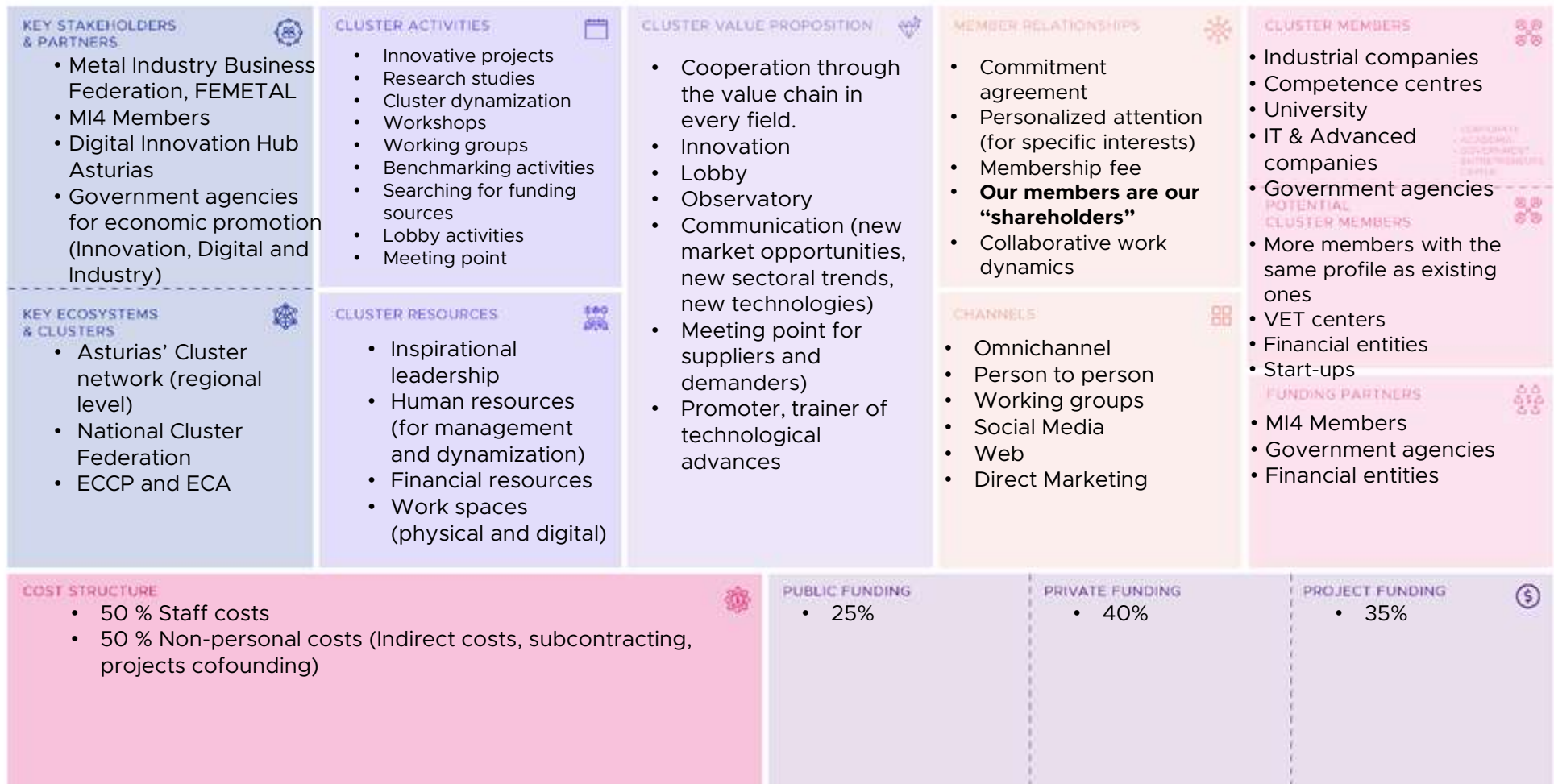
Highly competitive industry in global value chains thanks to its high degree of innovation and incorporation of advanced manufacturing technology, professional skills and high level of cooperation throughout the whole sector.

The main services that MetalIndustry4 offers to its members revolves around its three main strategic pillars:

- Integration in global value chains
- Collaborative innovation and technological improvement
- Human capital management

These activities consist of the promotion and dynamization of innovative projects, research studies, the organization of workshops, working groups, benchmarking activities, the search of public funding, lobby activities etc. On the other hand, due to the different origins and activities of its members, MetalIndustry4 becomes a meeting point of needs and solutions, challenges and opportunities, and the best place for finding the right partner to achieve their goals.

The **funding sources** that support the MetalIndustry4 business model are a combination of private (membership dues), public (regional support) and project funding. As the cluster increases the number of projects, the proportion of this share grows up over the rest. The Cluster does not have payment services, these services are included in the annual membership fee, that all members pay. A proof of their commitment with the cluster organization.



The Future of Our Cluster Business Model

A new challenging scenario

MI4 faces an unprecedented situation of changes at every level. The regional industry lives an integral process of transformation with key drivers of change such as: globalization, digitalization and decarbonization. In addition to this challenges the situation generated by COVID-19 has broken the ways to do and the ways to think.

We must rethink our model of relationship.

MI4 aspires to position its ecosystem as:

- Highly internationalized in markets and innovation projects
- The main tool for global networking
- The reference point (hub) for R&D projects

Likewise MI4 aims to:

- Expand the number and type of members to cover all ecosystem roles
- Become economically self-sufficient

The way to achieve this vision will be reach working in five strategic pillars:

- Integration in global value chains and supply chain
- Digital Transformation and Industry 4.0
- Innovation and R&D
- Talent and organizational culture
- Circular Economy and sustainability

The model of relationship must transform:

- More Open
- More Connected
- Feedback
- Goal-oriented
- Hybrid (mixing P2P and digital relationships)
- Agile

recommendation to other cluster managers



1. COMMITMENT

The commitment of the members is proof of the interest and value of the cluster. This commitment is shown through the payment of membership fees, participating actively in the projects and activities, providing ideas, needs, lessons learnt and sharing them with other members. This commitment should become a driving force for the rest of members and stakeholders along the value chain and regional stakeholders as well.



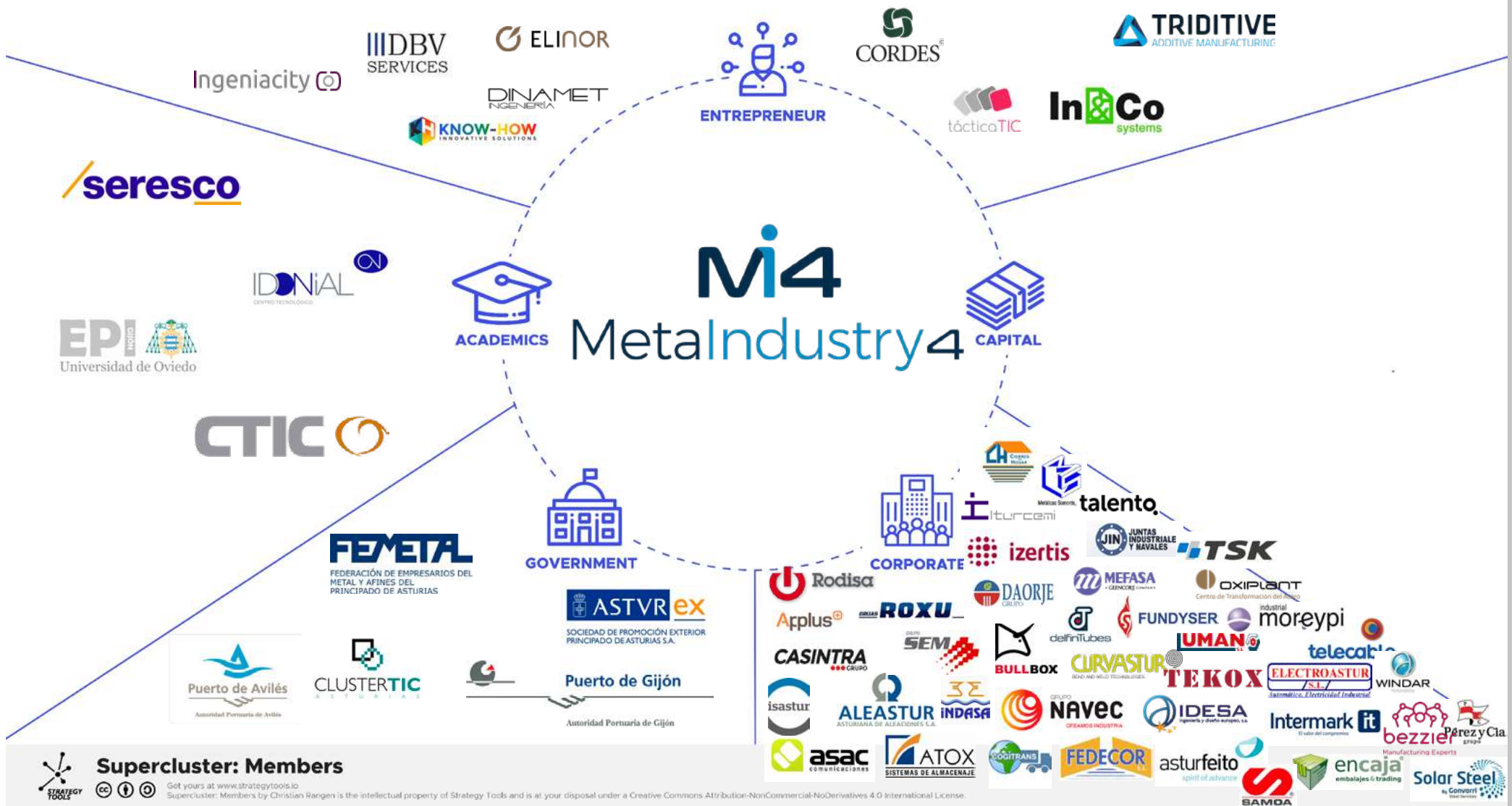
2. COMMUNICATION

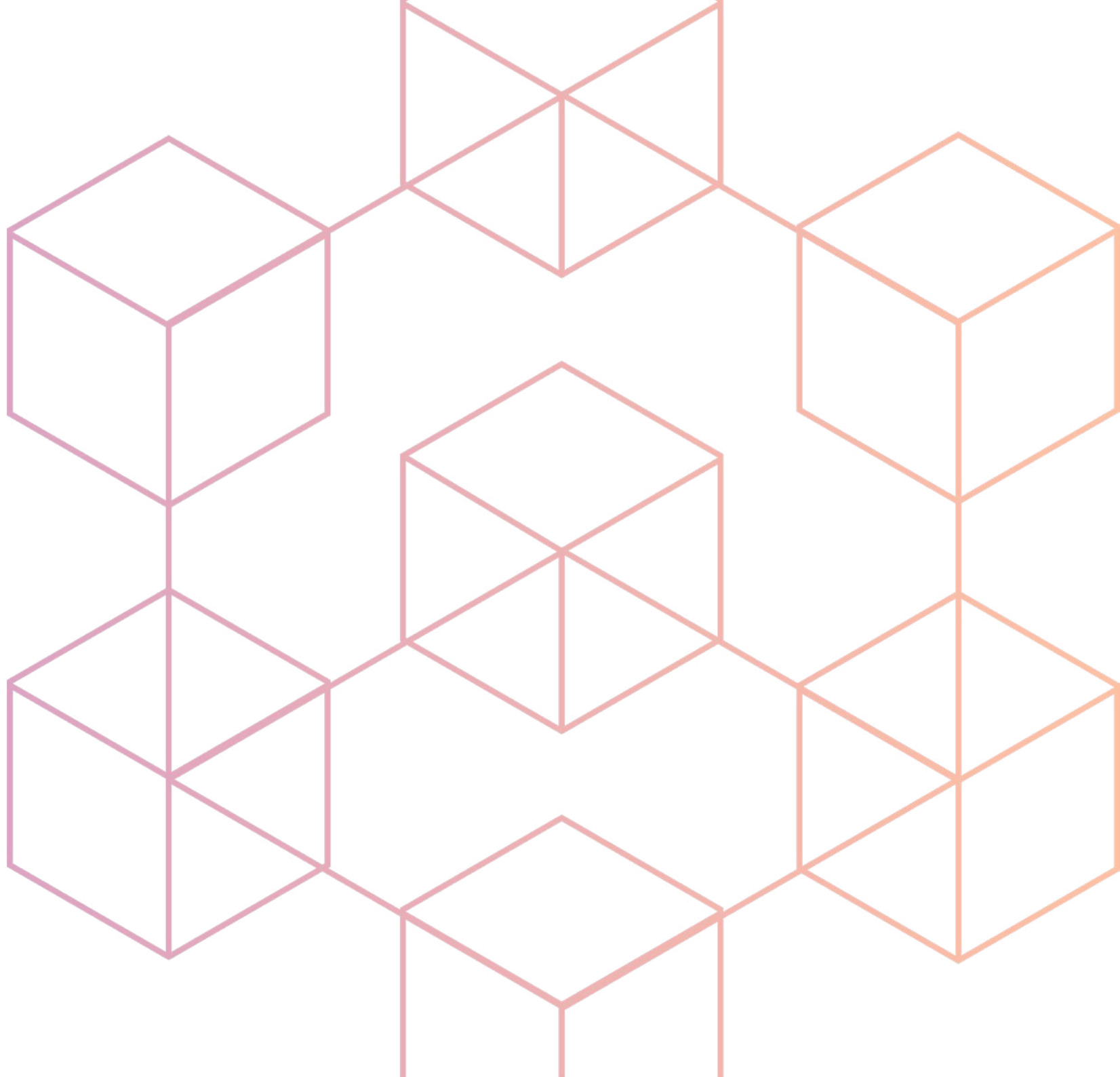
Every cluster needs to have a direct communication channel with its members, stakeholders and the community, always open and constantly fed. Communication creates engagement and improves positioning and visibility in every level. It gives access to new collaboration opportunities, access to new funding sources and opens new markets.



3. REFERENCE POINT

Clusters must become the main reference point for its members and stakeholders in terms such as innovation and digitalization projects, market intelligence and observation of new trends and prescriber with policy makers. Cluster is the key tool for connecting partners at every level, regional, national, international, along the value chain with high TIERS and suppliers, with knowledge institutions and competence centers, with start-ups and other advanced companies and in a close relationship with the Government.





case study

how the Construction Cluster of Slovenia developed its business model



Vladimir Gumilar
CEO
Construction Cluster of Slovenia



Andro Goblon
Project Manager
Construction Cluster of Slovenia



About the Construction Cluster of Slovenia

Construction Cluster of Slovenia is, irrespective of its name, a cross-sectorial cluster, focusing on the global value chain of sustainable and circular buildings, infrastructure, cities, and related industries.

The story began in 2004 when the Construction Cluster of Slovenia was established on the initiative of the Ministry of Technological and Economic Development.

The founding members at that time were the main Slovenian construction companies, mostly large and medium sized.

Since 2006, after the end of state subsidies, the cluster started to seek for new sources of financing and participated in EU funded research and innovation projects.

The positive impact for the cluster was the understanding of EU research priorities in the sector and industry, so we were able to see the broader picture of what will sooner or later become the standard in the construction industry. Participation in EU research and development projects has enabled the cluster to become a leader in new technologies or paradigms.

The Construction Cluster of Slovenia's Strategy in 3 Points

- 1. Becoming financially independent and have sustainable financing**
- 2. Increasing the recognition of the cluster**
- 3. Building up cross-sectoral and trans-national synergies and value chains with construction, energy efficiency and renewable energy sources industries**

Our Cluster Business Model

In the first two years, the cluster was partly financed by the subsidies from the Ministry for Technology and Economic development. The remaining funding was obtained from membership fees, which were determined according to the size of the company.

The initial funding was sufficient for office rental and the payroll of two employees (cluster manager and secretary). Four years later, a project manager joined the team.

Subsidies ended in 2006, which was when the cluster started seeking new sources of financing and began participating in EU-funded research and innovation projects.

For almost seven years this was a successful strategy. We extended our network in EU and beyond and became more experienced in collaboration in research and development.

However, there were also negative effects: due to increased involvement in research projects, the cluster slowly but steadily had less and less contact with its members.

An economic crisis hit Slovenia in the year 2010, which affected the cluster significantly - and in a few years after, almost none of the founding members of the cluster remained.

With very few members, who at the same time also paid lower membership fees, and with no national subsidies, the cluster survived only because it was a partner in several R&D projects.

The communication with the cluster members were at the minimum level, for example by monthly emails.

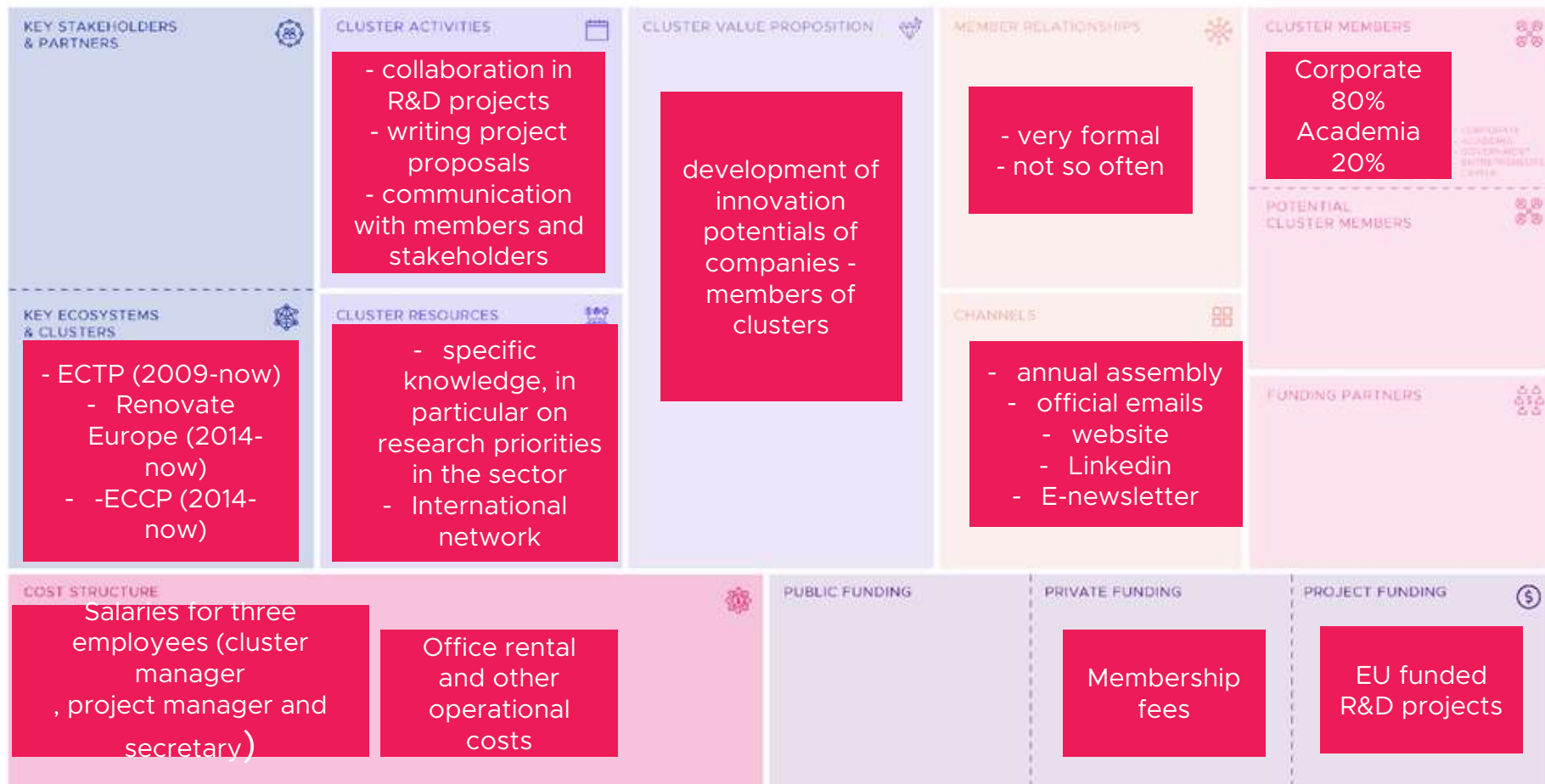


Cluster Business Model Canvas

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2004 - 2006
 2006 - 2009

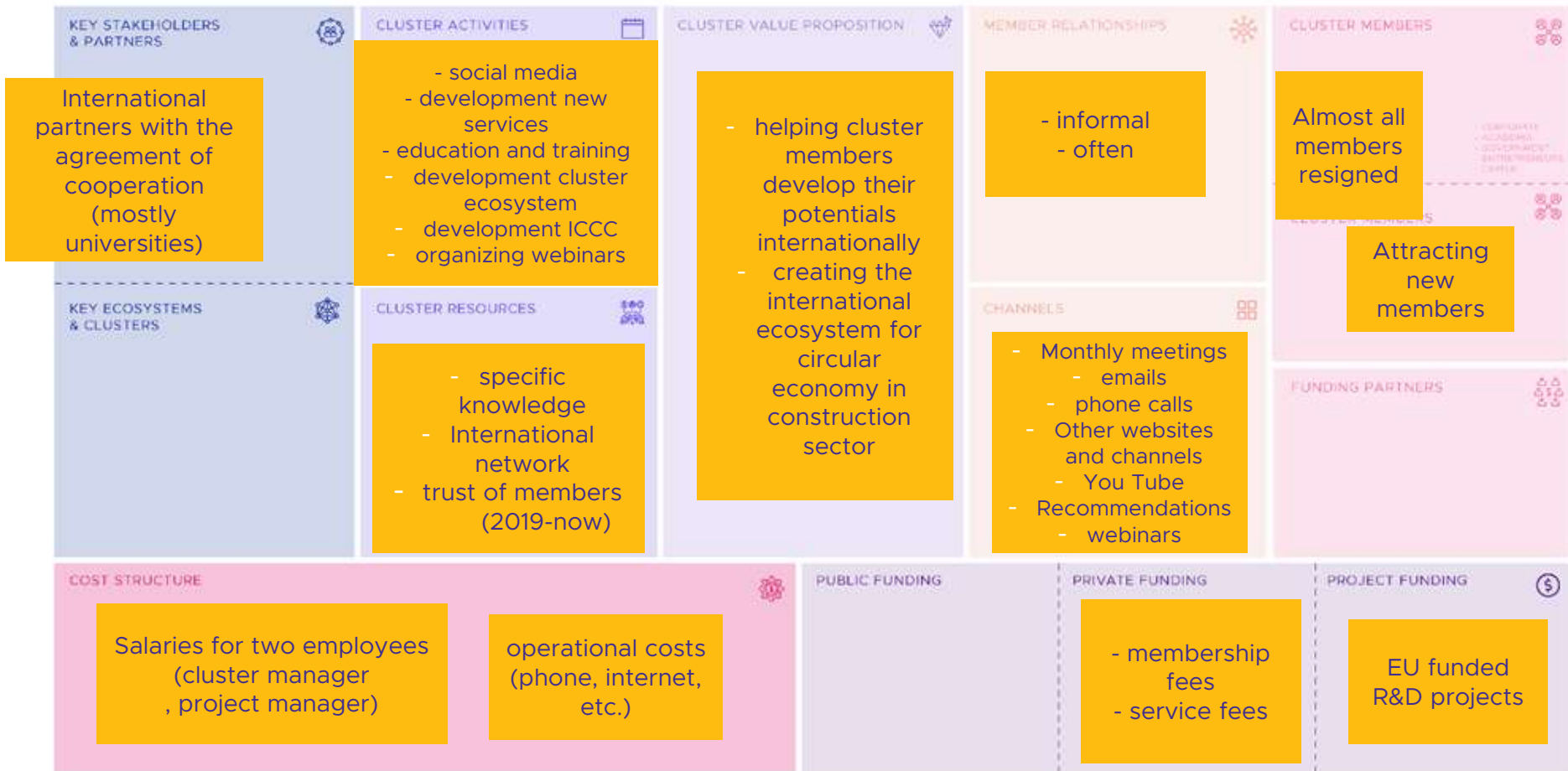


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2009 - 2014
2014 - 2018



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2018 - current

The Future of Our Cluster Business Model

Our main lessons learned:

- as a cluster, know your value
- understand how as a cluster you can support your members to be better and more successful
- understand how to become independent from subsidies, research projects etc. (because they are a very unstable source of financing)
- develop services for cluster members and others
- communicate regularly
- know your cluster members (what are their goals, what they expect, what from the wide range of possibilities within the cluster could be tailored especially for them, etc.)
- never, really never stop learning about clusters, networking, communication, use of social media
- don't sleep on the old glory
- reinvent your business model regularly
- connect with other cluster and cluster managers
- even in hard times, stay optimistic and look for solutions; if the government does not care for your cluster or think it's unimportant, complaining doesn't help and sometimes even worsens the situation
- know your competencies (because they can be translated into services)

Our future starts from here.

In 2021, we want to:

- develop the ICCC a step further and start to monetize it
- gain at least 20 new cluster members
- develop at least five new paid services
- communicate and collaborate with our cluster members at least 10% more compared to previous years

We believe that communication leads to new ideas!

recommendation to other cluster managers



1. COMMUNICATE REGULARLY

Communicate regularly, formally and informally and be a good listener.

Cluster members usually do not have homogeneous needs or expectations. Knowing them better can help you meet their needs satisfactorily and / or lead them to develop their potential.



2. KNOW YOUR COMPETENCIES

Understanding the personal competencies as well as cluster competencies is important to understand what problems you are capable of solving (you means you personally or your cluster office). If you are a good listener, you already know what the problems or expectations of your cluster members are.



3. WORK ON YOUR BUSINESS MODEL

The business model is not for “forever”.

Cluster can also has many business models, not only one.

Sometimes something unexpected happens, which can cause serious problems on business model, so you must know how to act quickly to avoid the damage.





part seven:
getting started
on your cluster
business
model journey

Getting started

If there is one thing we have learned while writing this report, it is that for every cluster, the development of and understanding of its business model is a journey.

For cluster leaders, whether you are a cluster CEO, board member, CFO, economic development officer, regional cluster program manager or even just contemplating starting a cluster (you should), here are five steps to help you get started on your cluster business model development.

1 Sketch

Sketch out your Cluster Value Triangle

Make sure to outline ambition & strategy, structure & governance, business model & financing. This should give you a high-level overview of your strategy and direction.

2 As-Is

Map out the as-is

Dive into the business model & financing part of the triangle. Map out the as-is cluster financing map and cluster business model canvas.

3 Engage

Engage with your board & key stakeholders

Working on cluster business models is not a one-woman job. You need both a team and the ecosystem with you.

4 Evolve & Iterate

As you build your skills with cluster business models, **start thinking about the evolution.** Start thinking about next steps and how you can iterate and experiment with the business model.

5 Collaborate

Finally, we encourage you to open source and collaborate with your board and key partners in shaping the next line of potential business models. Your job will be to facilitate, ask questions, get commitment and have others contribute.

**Don't be the designer.
Be the changemaker.**

Get your board to actively shape, own, and finance the next set of cluster business models.





part eight:
five levels of
cluster business
model
management



For cluster leaders, we believe the mastery of developing cluster business models will become increasingly important. Designing compelling value propositions, recruiting members and top talent, securing financing and projects; clusters do compete with attention, innovation and internal projects for both financing, people and time.

In developing this report, we have identified five levels cluster leaders can operate and manage its business models.

For many, the first step is simply to understand the basic question ‘what is a cluster business model?’, but quickly we move beyond that into the high performing areas of cluster management.

the five levels of cluster business model management





5. Compete

The best cluster leaders are actively competing and winning on cluster business models. They have the basics down and work hard every single day to improve, evolve and win at the cluster business model level. From new value propositions, developing global partnerships, securing large tech projects or identifying new revenue sources, these cluster leaders work at a different level as they outcompete both members' internal innovation teams and attract resources from 'internal' to 'open innovation', allowing member companies to connect, collaborate and go-to-market together vs. everyone going alone.



4. Evolve

More advanced users should be able to rapidly sketch out and test ideas around cluster business model evolution. How should your model change in the coming strategy period? What would happen if you lost one of your main financing sources? How could you evolve from a public to a private financing model? (Many cannot). At this stage, you should be able to run through scenarios and really think about exciting new opportunities for the cluster.



3. Optimize

Next is simply optimizing. We suspect you may identify gaps, weaknesses or outright burning needs in your cluster business model. Perhaps it is in the financing that may be running out. Maybe in the lack of clear value impact, or perhaps you realize that nobody outside yourself would be able to complete the entire canvas, as they hold only their own perspectives on the cluster.



2. Map

Next, we suggest cluster leaders should map out their own existing cluster business models and financing models. Start with the most basic tool, Cluster Business Model Map, move onto the Financing Model and Cluster Business Model Canvas. Take a shot at the Value Impact Roadmap. The goal, at this stage, is being able to map out your current model.



1. Understand

The starting point for most will be simply to understand cluster business models. Use the tools, read the case studies and learn from other cluster managers.



part nine: shaping the future of innovation clusters

why do we need innovation clusters?



In our work with clusters, economic development and entrepreneurial ecosystems, a crucial question comes up from time to time; why do we need innovation clusters?

Exploring this question, from Australia to Costa Rica, from the Middle East to Canada, a pattern emerged. Over the past two years we have been seeing this pattern emerge ever stronger.

We call this pattern Grow – Transform – Build.

Over the past few months, we have started segmenting a lot of clusters within these three categories, and a fascinating, deeper pattern emerged. We can now start seeing the connections between these categories of clusters and how the different types of cluster business models fit with each of them.

three reasons why we need clusters



GROW



TRANSFORM



BUILD



The “Grow” Model

- Expand in new markets, often exports
- Efficiency-driven innovation
- Increase basic trust and collaboration

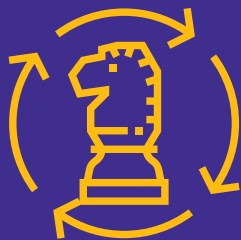
The first reasons for why we need innovation clusters is ‘grow’.

Here, the problem we are trying to solve is how we can continue to develop and improve an industry. Most likely, we are trying to grow the industry into new markets, apply new technologies faster, increase the collaboration and innovation, but underlying it all, is a shared ambition to reduce cost, increase margins and continue to grow the industry as-is.

In strategy, we would call this linear strategy or path-dependency. In more simple terms, more of the same.

This ‘grow’ reason is perfectly reasonable and may in fact be fueling a large part of innovation clusters around the world. Here, there is little interest in and need for disruptive innovation or transformational business models.

The focus for the cluster is to continue on the current path, just do it better, faster, cheaper.



TRANSFORM

The “Transform” Model

- Accelerate transformation within member companies
- Navigate significant industry shifts
- Bring startups and corporates together to speed up innovation

The second reason why we need clusters is ‘Transform’. In this model, we are seeing an industry – or a cluster – go through significant, industry-level changes. We call these industry shifts. The *raison d’être* is to help members, partners and the larger economy navigate and accelerate through these shifts – often happening at an rapid pace.

Today, most energy-related clusters are realizing they no longer operate under a ‘Grow’ model. Rather, they are all – willingly or unwillingly – going through a ‘Transform’ moment.

The Spanish Asociación Valenciana del Sector de la Energía, or Valencia Clean Energy Cluster, is one such ‘Transform’ cluster, helping their members accelerate under the New Green Deal.

In these clusters, the problem that is being adressed is how we can find new markets, new business models, apply new technologies, develop new partnerships and invest in entirely new business áreas – often outside or comfortable core business.

Many clusters are offering ‘Transformational Strategy Programs’ or market exploration programs, looking into markets that are just developing, for example in floating solar or finance technology.



The “Build” Model

- Develop a new industry from scratch
- Very limited number of members early on
- May struggle with funding and support in the beginning

‘Build’ is entirely different. Here, we are trying to create and build an industry that does not exist yet

This can be autonomous ships, solar energy (5-10 years ago), flying cars, electric aviation, deep space mining or any other industry that is still ‘on the horizon’.

In Norway, the autonomous mobility cluster SAMS set extremely ambitious targets, aiming to be one of the country’s top industries in less than twelve years. Only problem, the baseline analysis showed there was hardly any value creation, companies or even jobs in that space – a tall task, but perfectly suited for a ‘Build’ model.

Two years ago, I wrote an extensive training case study on Europe’s battery clusters. At the time, I was unable to find any meaningful clusters on battery, battery production and battery technologies in Europe. Since then, Europe has jump-started its battery landscape, in the processes kick-starting a number of battery clusters.

These clusters all share the same challenge; they are trying to build an entirely new industry, a key, critical industry for the future of Europe.

Naturally, the mindset, discussion, choices and urgency in these clusters far outweigh the culture and speed of innovation in our more traditional ‘Grow’ clusters.

implications for cluster business models



GROW

Stable business models. Often long-term funding in place.

Easy for members to see a 'safe' ROI on their participation in the cluster.

Easier to secure membership fees from larger companies.



TRANSFORM

Challenging business models, but often easy to secure partner financing (if they recognize the need for transformation).

Members may have very clear pain points and strategy challenges, making them realize the urgent need to invest in and together with the cluster to accelerate the transformation.



BUILD

Far more difficult to establish. Limited public financing early on. Limited corporate partners early on.

May reach a tipping point as the industry matures – like we are seeing with battery and clean energy sectors – where they are now suddenly perfectly positioned for public financing, grants, R&D projects and a perfect fit with members' innovation agendas.



part ten:
concluding
notes &
call to action

**a call to action.
globally.**



In writing this report it has become increasingly clear to us that the understanding of cluster business models is severely underdeveloped in most regions of the world.

Governments will fund national, regional and local cluster programs (a good thing). International organizations like the EU, World Bank and UN finance a significant number of clusters around the world.

Yet, few of these cluster organizations have their attention on the cluster business model.

Equally, for privately financed clusters, a significant amount of financing, time and energy go into making them successful. Yet, often without the most basic understanding of cluster business models, how they work or how they can help deliver better value and outcome back to the members.

These problems were identified by pioneers at the Norwegian national cluster program and have driven a lot of the early exploration into the topic. In one early workshop Chris attended, the cluster board was asked to 'create your cluster business model', only to see blank stares on the fifteen faces around the table.



This is now changing.

In this report we have met cluster leaders, from Australia, Mexico, the Netherlands, Slovenia and Spain who are optimizing, evolving and competing on business models.

Beyond that, in workshops, interviews, conversations and projects, we are meeting a rapidly growing number of people that are starting to pay attention to, understand and map their cluster business models.

Cluster leaders from Denmark, Iceland, the US, Canada, Oman, Australia, Costa Rica, Mexico, Norway, Finland, Germany, Spain, Italy, France, Portugal, the Caribbean and beyond have in various ways engaged with us on the topic.

We hope this report can help 1000's more leaders, from government agencies, ministries, national cluster programs, cluster management organizations, economic development agencies, business schools and ecosystems to work better and have a stronger impact with cluster business model.

Consider this a call to action – inspired by then great work done by Bianca Dragomir – to launch a cluster business model revolution. The tools are in your hands. Let's get it done. Together.

thank you.

about the
authors



Victor Haze

Victor has been working in ICT and project management roles for 26 years.

He engaged with customers and organizations within Finance, Energy, Oil & Gas, Governments and Healthcare.

He worked as a Business consultant for Atos KPMG Consulting and was advisor to the Board of Directors in a hospital. In 2014 he started working in a LSH cluster role as Innovation Manager. Recently he accepted the role of International Ecosystem Director.

Always looking to align the strategies of SMEs, Universities and HCOs using workshop settings with all stakeholders, applying a common language from visual thinking toolsets.

He is a Master Trainer and Global coach of Strategy Tools, a truly global community, where he focuses on the development of the paradigm shift of Triple Helix towards a pentagram Supercluster. He is working on this puzzle with Christian Rangen since 2019.

When not working, he can be found on a bike riding up a mountain.

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Christian Rangen

Chris is considered one of the world's leading experts in innovation clusters and Supercluster development.

He has worked on cluster projects in countries like Malaysia, Costa Rica, Mexico, Norway, US, Canada and Switzerland.

Through the 100% online Global Cluster Leadership Program he has worked with 100's of cluster managers worldwide.

Chris regularly works with and speak with global cluster leaders in countries like India, Iceland, US, Oman, Nigeria, Brazil, Spain, Emirates and China.

Currently, he is deeply engaged in developing better strategy frameworks for national cluster programs, allowing countries to develop next generation national cluster programs.

He is also the inventor of Strategy Tools and the 55+ toolkits in the Supercluster Series, in use with 100's of clusters around the world; and always being improved upon by learning from great people like Victor and the global community.

When not zooming, he can be found skiing with his family in Norway.

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learn more



Global Cluster Leadership Program

Self-Paced with Monthly Digital Workshops

Designed for cluster managers, cluster boards, national cluster programs, policy makers, and ecosystem developers, the Global Cluster Leadership Program helps you build capacity for cluster management.

LEARN MORE

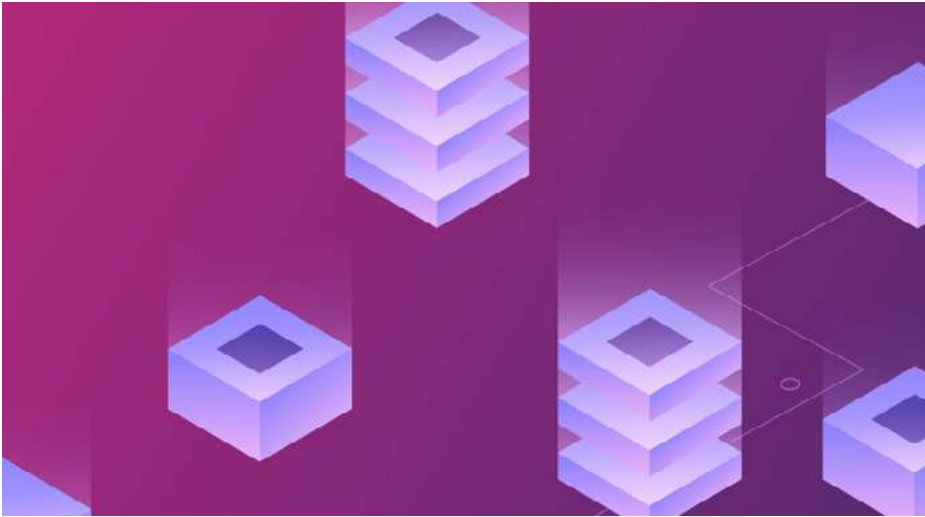
Learn more at
www.strategytools.io/global-cluster-leadership-program

“The Global Cluster Leadership Program was an exciting combination of cluster case studies, cluster strategy and leadership exercises and interviews. Very inspirational and practical course for any cluster manager.”

Jari Aaltonen
Cluster Manager, Bloom Cleantech Cluster,
Barbados

“We now have a strategy for Scale-Ups and Capital which is the direct result of working with Strategy Tools. Chris brings with him deep insight on cluster work that has been invaluable to us.”

Arild Kristensen
CEO, Smart Care Cluster,
Norway



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“Transformation is not plug and play, you have to initiate a change, re-invent yourself and return to be a future oriented and teachable organization. Building the Transformational Company can help you plan, start, lead and structure this journey to develop new in-house strategic capabilities.”

Enrico Maset,
Strategic Foresight Lead
SteepConsult

“I had the pleasure of taking the Building the Transformational Company program in 2020 and it was personally revelational. How I wish I knew then, what Strategy Tools has helped me see so clearly now!”

Bill Fischer,
Senior Lecturer, MIT / Sloan School of Management
Professor Emeritus of Innovation Management, IMD



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I find the approach of the strategy tools genius in its simplicity. When we work with startups and scale-ups, they're often very focused on what they do and don't have the academic background in finance and strategy.

This makes it difficult to have impactful strategic discussions with them about commercialization and investments. The Scale Up Coach program equips you with a set of tools that enables a pragmatic and simple approach to having the necessary discussions without a lot of fuss or being cost-prohibitive.

I would recommend this program to everybody who considers themselves advisors to startups and scale-ups.

Elin Hauge,
Co-Founder and Partner
Network Development Hub

Supercluster! The Innovation Cluster Simulation

Available in both physical kits and digital formats - the Supercluster! Simulation has been used by innovation clusters, national cluster programs, cluster leadership programs, cluster accelerator programs and business schools to help shape and build cluster strategies across the globe.

Supercluster! Digital can be fully designed around your unique needs. We can deliver 100% digital programs for 3 people, up to thousands of people in a highly-scalable solution.

The proven Supercluster! simulation, combined with in-depth visual tools and easy-to-grasp exercises, we can support any cluster initiative, from early-stage cluster building, Supercluster strategy, or developing a national cluster program.

Let's talk and see how Supercluster! can help solve your biggest cluster strategy challenges

[LEARN MORE](#)



previous cluster reports



Building Innovation Superclusters

Superclusters are on the rise around the world. Corporate leaders, governments, academics and entrepreneurs all look to Innovation Superclusters and their potential economic impact. The report is based on work with over 40 clusters and cluster initiatives (from autonomous mobility, drones, energy transformation, heavy industries, aquaculture and more).

[DOWNLOAD NOW](#)



Building Switzerland's Innovation Superclusters

Over the recent weeks, we've met with hundreds of people to discuss and understand the Swiss innovation ecosystem. The goal has been to get a deeper understanding of the current and future ecosystem, and what possible Superclusters that might emerge around new areas, new technologies and new Swiss initiatives. This preliminary report is a brief summary of our findings so far.

[DOWNLOAD NOW](#)

upcoming book



Business clusters, or agglomeration economies, are a natural phenomenon in many regions and to many economic activities. Clusters have been recognized in management literature since the 1890's, but tracing back to the earliest days of human organized economic activities, as suppliers, customers and partners naturally would group together.

In most parts of the world, clusters are understood as geographical clusters, often around a specific industry or field. Media, high tech, life sciences, med-tech, space travel, maritime, finance, seafood, energy; these all have strong geographical clusters that have evolved and matured naturally over time.

Today, we are learning to build, shape and design far more impactful clusters. We see new clusters rapidly emerging, often built around the "industries of the future", helping regions, nations and national leaders navigate economic shifts and prepare for new economic growth in future growth industries.

Since the early 2000's, the term Supercluster has been evolving, shaping ambitious political and industrial thinking in Asia, Americas and Europe.

Having personally worked with Supercluster development projects in Europe and Asia, we deeply believe in the power of Innovation Superclusters to accelerate industry shifts and help race a region, a country or an industry into the future.

Yet, we recognize the work, the complexity and the massive amount of stakeholders to engage to successfully scale a Supercluster. Looking into the future, we hope to continue to advance our own understanding of global clusters, continue our research activities, evolve our toolkit for future Superclusters and help build a generation of new engines of innovation around the world. We wish all cluster managers and leaders all the best on their exciting journeys.

In the upcoming book, we will share our key research findings, and present a roadmap for building new innovation superclusters over the coming decade.

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Sign up for early access, free excerpts and exclusive webinars at www.engage-innovate.com/books/innovation-superclusters



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