



CONSTRUCTING SWEDISH SOVEREIGNTY

How North Middle Sweden's Bioeconomy is
Constructing the Jobs and Companies of the Future

By Rodin Genoff
with Graeme Sheather

Foreword by Kjell Grundström, Chairman, Sparbanksstiftelsen, Dalarna, Sweden

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2023

FOREWORD

Working With What You Have

CREATING THREE SWEDISH FIRSTS

At the outset of this project, we were committed to delivering a Swedish first.

Ambitious? Yes.

Creating high expectations? Absolutely.

But when you assemble a highly motivated and smart project team working in collaboration with Rodin Genoff, one of the best ecosystem and industry experts in the world, anything is possible.

We put our trust in the Swedish tradition of contain your ego, put your head down, be collaborative and get the job done.

And we haven't looked back.

The result? The North Middle Sweden Ecosystem Mapping Project has delivered three Swedish firsts!

1 VILLA ZERO

The creation of Villa Zero is Sweden's first certified carbon neutral residential house. This extraordinary achievement is a direct result of the project's mapping methodology. It used the process of *intentional collaboration* to create a highly creative, innovative and commercial partnership between Fiskarhedenvillan, a designer and builder of

residential housing, Mondo Architects and Structor Engineering.

The application of new technical knowledge has reduced Fiskarhedenvillan's carbon footprint across its new residential housing developments by 15 per cent. This reduction will compound in the medium term as the company taps into Villa Zero's economies of scale, scope and learning, and as other companies in the region's building and construction ecosystem learn from these technical advancements in decarbonising the economy.

For example, Villa Zero has involved some 40 regional sub-suppliers in circular economy training workshops. This is a great example of how these three partnering companies, by collaborating with ByggDialog (Region Dalarna's building and construction business association), are delivering a regional innovation, product commercialisation and sustainability dividend.

By any measure, this is an impressive result.

At a time of corporate greenwashing, this project shows how ecosystem thinking and applied collaborative approaches can drive the dissemination of new knowledge and ideas found at the heart of circular economy principles.

2

WOMEN BUILDING SWEDEN

The North Middle Sweden project had gender diversity designed into it from the very start. It has built on the gender and diversity work we in Sweden have been developing over decades. We're proud that our hard work keeps us at the top of the European Union rankings for gender parity.

Our methodology also tapped into the important new economy insights outlined in Narelle Hooper and Rodin Genoff's book, *New Women, New Men, New Economy*.

For an industrial project, even by Swedish standards, this was novel.

Our project team succeeded in developing a strategic business partnership between two outstanding female business leaders: Gabriella Hagman, CEO of Mondo Architects, and Kristina Hansen, Managing Director of Structor Engineering. The aim was to integrate their joint capabilities to help them to bid for new projects and win new contracts, with a focus on sustainability and using gender diversity to drive innovation. And they succeeded!

Meantime, at one of our project meetings with both these companies we thought: “Wouldn’t it be great to create a new women’s business network that was all about creating new jobs and investment opportunities with a focus on sustainability in the building and construction industry.”

A network that would be a Swedish first. And build on our proud Swedish tradition of using gender diversity to drive innovation and market development.

Our project team named this network *Women Building Sweden*. It extended the work of Annica Granberg, at ByggDialog, who had been networking local female CEOs and senior managers.

Dalarna Regional Governor Ylve Thorne subsequently agreed to become the network’s Patron.

At a time when many women’s networks already existed and were focused mainly on leadership and professional development, Thorne supported *Women Building Sweden* because it was about creating jobs and new business opportunities.

It was also about creating great workplaces of the future that would provide rewarding career pathways for young women - like you’d find in Fiskarhedenvillan, Mondo Architects and Structor Engineering. And inviting them to join progressive companies in Dalarna rather than drifting off to Stockholm.

What better way of building a long-term talent pool of young women contributing to the region's ability to successfully navigate all that the new economy throws at us.

3 NEW BENCHMARK FOR ECOSYSTEM MAPPING AND ANALYTICS TO FORGE NEW BUSINESS OPPORTUNITIES

The third Swedish first was the application of Rodin Genoff & Associates innovative BOSP ecosystem methodology, which is integrated into company mapping and spatial and data analytics technology.

Rodin Genoff & Associates, as a pioneer in cluster mapping, has lifted its expertise to a new level in this project.

The company's managing director, Rodin Genoff, began from the premise of what drives the new economy. And how can regions create the high trust ecosystems necessary for companies to collaborate, win new contracts and support long-term regional productivity growth.

As my partner companies in Sparbanksstiftelsen Dalarna know, this comes only from new investment and a genuine confidence on the medium to long term return on investment.

Rodin's qualitative and quantitative tools were uniquely refined and developed for this project to examine the drivers of North Middle Sweden's business performance and future predictors of growth. And to map connectivity between companies.

His team's analysis enables us to identify our industrial ecosystem's closed and open innovation systems, especially "collaborative and innovative hot spots" as Rodin likes to call them.

This essential industry intelligence is used to pinpoint which companies we were to work with, how to work with them, and companies that could

be fast-tracked into new strategic business collaborations, as we have seen in the creation of Villa Zero.

Along with Rodin's company principal Graeme Sheather, a former professor of manufacturing management at the University of Technology Sydney, they take you on an eye-opening journey into the world of the new economy, where the transition to Industry 4.0 circular economy business models is increasingly propelled by gender balanced teams.

I invite you to read this technical analysis in Part 3 of the book.

CONSTRUCTING SWEDISH SOVEREIGNTY

This project demonstrates, as Rodin's mantra goes, that by "working with what you have" traditional industrial regions play an integral role in Sweden's future and profitable transition to the new economy. Whether it's the production of components, intermediate goods or finished goods, industrial regions are vital to Sweden's on-going export effort and maintaining its current account surplus. Especially now!

Covid-19 has redefined global supply chains. The Ukrainian war is challenging the European Union's energy sovereignty. And adding even greater uncertainty to this already volatile economic and political environment is the West re-defining its relationship with China, from trade to technology policy.

As many have reported in the financial press, we are moving from a globalised world to a de-globalised world. What we design and manufacture locally is more important than ever.

For Sweden this means greater industrial resilience - and the nation-building investment in *Constructing Swedish Sovereignty*.

DETERMINATION TO SUCCEED

This project was at least a couple of years in the making.

But this is what it takes to formulate new ways of thinking, new ways of working.

Beginning in the middle of 2019, we have achieved a lot in record time. Despite Covid-19, we continued to build on selected project opportunities with Rodin's guidance.

The project team and a selected number of companies were determined to succeed.

At first it was hard. But then, as we adapted and became accustomed to the brave new world of zoom and team meetings, we delivered three Swedish firsts in a very proud industrial region. And there were other results, even though not firsts, that were just as transformative for those participating companies.

Such as the collaboration forged between Hilmer Andersson and Fridh & Hell's to design and build a state-of-the-art cross laminated timber surface treatment plant, one that would dramatically reduce waste and the use of chemicals in timber surface treatments.

It was another sustainability dividend for the region's bioeconomy ecosystem generated through this project.

AN EXEMPLARY PROJECT TEAM

As chairman of Sparbanksstiftelsen Dalarna, along with the project's business partners the European Union, Tillvaxtverket, Region Dalarna, IUC, ByggDialog, Dalarna Science Park and Paper Province located in Varmland, I am very proud of the results generated through this project.

I am particularly grateful for the work of the project team led by Rodin Genoff and comprising Stefan Jansson, former Chief Innovation Officer, Dalarna Science Park; Bosse Lilja, Director IUC Dalarna; Annica Granberg, now Vice President ByggDialog; Paul Nemes, Deputy Director Paper Province; and myself.

READ ON AND BE INSPIRED

I commend Rodin Genoff on preparing this book and warmly invite you to read it and share it.

Constructing Swedish Sovereignty is a book that is part analysis, part narrative, part personal storytelling, part business collaboration toolkit.

It is a thoughtful, well researched and engaging book that puts you, the reader, in the front row of these transformative Swedish accomplishments.

From these pages, whether you're the CEO of a company, sit on a company Board, a cluster manager or someone working in a government ministry, there is much to be learnt: new economy lessons and ways of working and collaborating that can be applied day in day out.

It is for this reason that the Sparbanksstiftelsen Dalarna Sweden is supporting the publication of *Constructing Swedish Sovereignty* in collaboration with ByggDialog, IUC Dalarna, Paper Province, Dalarna Science Park, and Region Dalarna.

I believe my partner companies, especially SMEs, can apply the book's insights and learnings into innovatively and profitably aiding their transition into the new economy.

And, in so doing, take Region Dalarna and North Middle Sweden to the world.

Kjell Grundström
Chairman, Sparbanksstiftelsen, Dalarna, Sweden



PREFACE

THE YEAR THE OLD-WORLD ORDER WAS UPENDED

It's 2019. The eye of the storm. A marker between the business-as-usual past and a future no-one predicted. The Covid-19 pandemic. War in Europe.

It was into this storm that the North Middle Sweden Bioeconomy Ecosystem project team flew. Yet, despite all the headwinds and uncertainty, this unique project delivered three Swedish firsts as Kjell Grundström has just explained in his *Foreword*.

But then 2019 turned out to be a big year for all things Swedish.

“Spotify, Skype, iZettle, Klara, Oatley, Minecraft, King, to name a few, can all be classified as Swedish unicorns,” blasted the opening lines to a 2019 Forbes magazine feature, *Sweden: Europe's Historic, Current and Future Innovation Hub*.

Especially hard to miss was Greta Thunberg becoming an international sensation. The 16-year-old environmental activist from Stockholm ignited global student strike action from Paris to New York, and up-ended Donald Trump, the former President of the United States, as *Time* magazine's *2019 Person of the Year*.

Amping up the volume was Swedish female electronic dance music duet ICONA POP with their hit song *I Love It*. Their chorus line of “I don't care” becoming the unofficial anthem for young women around the world. And one that could be heard crashing and reverberating around the concert hall walls of the prestigious Nobel Prize dinner in Oslo!

Then 2020 rolled in. And the Covid-19 pandemic struck.

By February, global stock markets crashed. People were being arrested as police enforced lockdown orders. Nightly TV news programs began with dire predictions from epidemiologists and ended their bulletins with cameras panning empty streets and deserted cafes amid rising death tolls.

And for anyone tired of the lockdowns, Sweden's state epidemiologist Anders Tegnell was the go-to man. His "controversial" views on "individual responsibility" for tackling the Covid pandemic became global news.

Not since ABBA was Sweden so discussed. Tegnell had single-handedly kept Sweden in the international spotlight, sparking UK's *Guardian* newspaper to run with the opinion piece, *Welcome to libertarian Covid fantasy land*.

"Surely not Sweden?" many of us asked in utter disbelief.

So what was going on? Actually, quite a bit! But getting to the bottom of this takes a bit of digging.

THE SWEDISH WAY

Making sense of all things Swedish is former *Financial Times* news editor David Crouch. He penned the go-to book for non-Swedes, *Almost Perfekt. How Sweden works and what we can learn from it* (2019).

"Sweden is a country that defies the laws of economic gravity. A land with high wages, strong unions and generous welfare. A dream location for business and a bastion of social responsibility, coming out on top for childcare, and quality of life," explains Crouch, who lived in Sweden for six years.

Sweden consistently ranks at the top of the global innovation indices year in year out. In fact, in 2019 Sweden ranked second and well ahead of the US despite all the media hype surrounding Silicon Valley and the stellar rise of tech stocks on the NASDAQ.

And is the case for all the Nordic block, innovation goes hand in hand with sustainability. Sweden in 2022 ranked first for sustainability on the *Global Green Economy Index* (GGEI).

Second was Switzerland and rounding out the top of the pops were Norway, France, Denmark and Iceland.

Laggards trying to catch the leaders included Australia ranking 18, New Zealand at 25 and the United States at 38.

So far so predictable. Or is it?

For our non-Swedish readers, what comes next may come as a bit of surprise!

What other country in the world would have its national innovation and technology departments release a world first publication titled *Innovation and Gender* (2014)? A topic one would normally find buried in a downsized Office of Women. Surely not something important enough for such an influential government department to be busying itself with.

Well, Sweden did, through Tillväxtverket and Vinnova, it's respective departments of regional economic development and innovation.

Anyone clinging onto the old-world order was in for a rude awakening. Tillväxtverket and Vinnova's inter-departmental report categorically concluded that gender balanced teams delivered "superior financial performance". And if Sweden was to maintain its pole position in the global innovation ranks, this meant putting 100 per cent of its population to work and tapping the creativity and ingenuity of all its men, all its women.

All this provided the perfekt backdrop, context and inspiration to our *North Middle Sweden Best Practice Bioeconomy Ecosystem Mapping* project.

LOFTY AMBITIONS

Several years ago Vinnova had invited me to join a group of international cluster experts to evaluate Triple Steelix, Sweden's steel industry cluster located in Borlänge, a couple hours north of Stockholm. It is the epicentre of Sweden's manufacturing heartland.

It was here that I met an extraordinary team of committed individuals. A year or so later, we would work together to map Triple Steelix's industrial ecosystem and identify innovation hotspots that could ignite new collaborations between companies.

The work and relationships endured. As did the motivation to continue to work together.

So please let me take a moment for a quick round of introductions. Stefan Jansson is former Chief Innovation Officer at Dalarna Science Park. Kjell Grundström, a seasoned former chief executive, is a Senior Manager at Dalarna's Industrial Development Centre (IUC Dalarna). He serves on numerous company boards including a pension fund. Bosse Lilja, has become Director of IUC Dalarna and Lena Norrström, who previously worked for Triple Steelix, is IUC Dalarna's marketing and business liaison manager.

Stefan especially has a passionate belief in his region: "It was time the rest of Sweden knew what we really did up here. The companies are ..." and during his pause, before he could finish his sentence, I interjected: "Yes, some of the best in the world".

"Rodin, as you know we Swedes are far too modest to be claiming we're the best in the world at anything," Stefan said. "Especially here in the regions," added Lena.

"Absolutely! No one knows that we're a Swedish and European industry powerhouse," added Bosse. "But we can't look to the past. We need

projects that can secure jobs here for future generations. We don't want to be a region that goes the way of the mid-west in the US.”

A line was drawn in the sand by an impressive group of individuals who had spent their lives devoted to building the region's potential.

Their grit and determination reminded me of world-renowned anthropologist Margaret Mead's powerful refrain: “Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.”

And so, the *North Middle Sweden Best Practice Bioeconomy Ecosystem Mapping* project was born out of a determined commitment to reshape Dalarna's future destiny.

Rodin Genoff

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PROJECT TEAM

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Rodin Genoff
Lead Project Consultant
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BIOGRAPHIES

Rodin Genoff, founder and Managing Director,
Rodin Genoff & Associates

Rodin has built a global reputation as an award-winning industry cluster development expert and author. His international recognition includes being named by ABC Carbon Singapore as one of the *World's Top 100 Sustainability Leaders* for his innovative cluster work creating joint ventures between cleantech and manufacturing companies.

Specialising in working with SMEs, Rodin has developed a unique set of tools to help regions to transition and diversify their industries and economies, including the cluster mapping and data visualisation technology *WinningClustersLive*.

His distinctive toolkit includes data-driven *intentional collaboration*, a process that helps CEOs and cluster managers to fast-track the formulation of new joint ventures. In this way he helps drive local investment and industrial and market diversification through the creation of new products and services.

Author of five books on manufacturing, innovation, industry clusters and regional development, his last sell-out book was *New Women, New Men, New Economy* (Federation Press), launched at the *Advance Global Innovation Awards* at the Sydney Opera House.

Rodin has served on national and international government advisory boards ranging from Australia to Denmark and the OECD.

Graeme Sheather, Principal Manufacturing Management,
Rodin Genoff & Associates

Graeme has closely partnered and collaborated with Rodin Genoff for the past 20 years including co-authoring two books.

Together with Rodin, he developed the *Business Opportunity and Strategic Potential Framework*, a best practice industrial auditing and ecosystem and cluster mapping tool.

He has advised leading manufacturing CEOs around Australia on technology, innovation and, most recently, on virtual technologies that are transforming industrial design and production.

Former Professor and Head of Manufacturing Management at the University of Technology Sydney, Graeme is an expert in the field of manufacturing best practice.

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We are moving from a globalised world to a de-globalised world. What we design and manufacture locally is more important than ever. For Sweden, this means greater industrial resilience - and the nation-building investment in *Constructing Swedish Sovereignty*.

"*Constructing Swedish Sovereignty* is a highly engaging book that puts you, the reader, in the front row of how the North Middle Sweden Bioeconomy Ecosystem Mapping Project created three Swedish firsts," says Kjell Grundström, Chairman, Sparbanksstiftelsen, Dalarna, Sweden.

"Part in-depth analysis, personal storytelling and detailed collaboration toolkit ... I believe my partner companies, especially SMEs, can apply the book's learnings to profitably fast-track their transition into the new economy and take Region Dalarna and North Middle Sweden to the world."

"Without this project, we would not have formed the collaboration with Mondo Arkitekter and Structor Byggteknik to design and build Villa Zero, Sweden's first certified carbon neutral house," says Gunnar Jönsson, CEO of Fiskarhedenvillan, Sweden's second largest home building company.

Constructing Swedish Sovereignty demonstrates how Rodin Genoff is able to create a high trust and highly interconnected and collaborative industrial ecosystem that is integral to building successful new economies.

"Through this project, we created *Women Building Sweden*, a women's business network for the construction industry, to support, design and build green projects," say Kristina Hansen, CEO of Structor Byggteknik, and Gabriella Hagman, CEO of Mondo Arkitekter, co-founders of *Women Building Sweden*. "Contributing to more women entering the industry, and also taking leading roles, is extremely important."

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