Nordic Impact Startups 2021
Why this report

The Nordics have a strong reputation for creating innovative startups working to create a sustainable impact in the world. But what’s the real state of play? Do Nordic countries really over-index for impact innovation? What is an impact startup anyway? And can they offer investment returns as well as real world change? Every year Danske Bank supports the creation of a report examining in detail development of the Nordic impact startup scene, to assess and nuance the common perception of the ecosystem. Predictably, not all myths hold true.

With this report we wish to bring data and facts about the Nordic Impact startups to the table, with an added focus on ‘Green Growth’ startups. By doing so we hope to shed light on the challenges and opportunities in the Nordic and broader Impact ecosystems.

In the following, you will see the most detailed analysis of the Nordic impact ecosystem to date, based on data from 1,230 startups, 1,365 funding rounds, supplemented by qualitative insights from experts and industry players.
### Executive summary

#### Nordic impact

<table>
<thead>
<tr>
<th>Myth 1:</th>
<th>Nordic countries are global leaders within the impact space.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARTIALLY FALSE</td>
<td>Investment into Nordic impact startups skyrocketed to €1.6B in 2020, driven by Sweden. However, the combined region still trails behind the UK.</td>
</tr>
</tbody>
</table>

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<th>Impact startups will stay small and not create a significant number of jobs.</th>
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<tr>
<th>Myth 3:</th>
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</tr>
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<td>Seed stage impact startups were more likely to raise a Series A round within 36 months (39%), than non impact startups.</td>
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</table>

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<thead>
<tr>
<th>Myth 4:</th>
<th>Within impact, Deep Tech startups are a safer bet.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUE</td>
<td>Nordic Deep Tech Impact startups have higher and more rapid conversion rates to series A than non Deep Tech impact peers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Myth 5:</th>
<th>Nordic impact teams lack commercial experience.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALSE</td>
<td>The founders of every major Nordic impact startup have significant commercial experience, and Nordic corporates and established startups are becoming breeding grounds of entrepreneurial talent.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Myth 6:</th>
<th>Impact startups are better at forming diverse and strong teams.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUE</td>
<td>Impact startups can form better teams and also benefit from increased founders’ diversity.</td>
</tr>
</tbody>
</table>

#### Green Growth

<table>
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<tr>
<th>Myth 1:</th>
<th>The Nordic countries each specialise in different Green Growth clusters.</th>
</tr>
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<tbody>
<tr>
<td>FALSE</td>
<td>Sweden leads in all green clusters except in Materials and Resources where Finland takes a leads. Norway punches above its weight in Energy &amp; Utility.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Myth 2:</th>
<th>Green Growth is more capital intensive than traditional tech.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALSE</td>
<td>Green Growth startups have the same median size for early stage rounds compared to benchmark, increasing from Series B.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Myth 3:</th>
<th>Green Growth startups are heavily dependent on public funding at early stage.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUE</td>
<td>In the Nordics, public funding is highly concentrated in the early stage segment, making up 46% of seed stage funding. It is also more likely granted to Green Growth startups compared to benchmark.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Myth 4:</th>
<th>VCs don't invest into Green Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALSE</td>
<td>VC investment into Green Growth startups, is 2x higher compared to 2019 and 12x higher than 2016.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Myth 5:</th>
<th>Corporate investors are particularly active in Green Growth.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUE</td>
<td>Green Growth startups receive double the proportion of funding from Corporate investors as non Green Growth startups.</td>
</tr>
</tbody>
</table>
Table of contents

Nordic Impact

- page 06  ●  “Nordic countries are global leaders within the impact space.”
- page 12  ●  “Impact startups will stay small and not create a significant number of jobs.”
- page 17  ●  “Impact cannot scale at the rate needed by VCs.”
- page 24  ●  “Within impact, deep tech startups are a safer bet.”
- page 29  ●  “Nordic impact teams lack commercial experience.”
- page 35  ●  “Impact startups are better at forming stronger and more diverse teams.”

Green Growth

- page 41  ●  “The Nordic countries each specialise in different Green Growth clusters.”
- page 46  ●  “Green growth is more capital intensive than traditional tech.”
- page 52  ●  “Green Growth startups are heavily dependent on public funding at early stage.”
- page 60  ●  “VCs don’t invest in Green Growth.”
- page 65  ●  “Corporate investors are particularly active in Green Growth.”
Impact is to have sustainability at the core

In this report, an impact startup is a company that addresses one or more UN Sustainable Development Goal (SDGs) at the core of its business and the potential to scale. Our litmus test: if you remove the impact you also remove the business.

Green Growth refers to startups specifically seeking to improve environmental conditions as part of their main business activities.

Impact and Green Growth both sit within a broader framework of Environmental, Social and Corporate Governance (ESG) which seeks to reduce the harmful impact of business.

The full methodology and definitions are available in the appendix glossary.
Myth 1

“Nordic countries are global leaders within the impact space.”

Investment into Nordic impact startups skyrocketed to €1.6B in 2020, driven by Sweden. However, the combined region trails behind the UK.
Nordic impact startups have seen a step change in investment in the last two years, and has grown 25x in the last 10 years.

Yearly venture capital investment into Nordic impact startups

<table>
<thead>
<tr>
<th>Year</th>
<th>Investment (€M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>65</td>
</tr>
<tr>
<td>2011</td>
<td>18</td>
</tr>
<tr>
<td>2012</td>
<td>35</td>
</tr>
<tr>
<td>2013</td>
<td>46</td>
</tr>
<tr>
<td>2014</td>
<td>70</td>
</tr>
<tr>
<td>2015</td>
<td>99</td>
</tr>
<tr>
<td>2016</td>
<td>232</td>
</tr>
<tr>
<td>2017</td>
<td>362</td>
</tr>
<tr>
<td>2018</td>
<td>498</td>
</tr>
<tr>
<td>2019</td>
<td>1.5B</td>
</tr>
<tr>
<td>2020</td>
<td>1.6B</td>
</tr>
</tbody>
</table>
Venture capital in the Nordics is significantly more impact focused than in other regions, and has become a major portion of all VC activity.

Impact investing as a percentage of total VC investment

Dataset: 6,200 global impact companies. Source: dealroom.co
Venture capital’s focus on impact investing has been growing in every Nordic country, with the highest growth in Sweden.

Impact investing as a percentage of total VC investment

Dataset: 1,230 companies. Source: dealroom.co
However; the UK alone receives more impact investment than all the Nordic countries combined.
Key takeaways:

- Investment into Nordic impact startups grew significantly over the last decade, skyrocketing from €65M in 2010 to €1.6B in 2020.
- Impact investing is now a core part of VC investment in the Nordics, making up for ~30% of all VC investment in 2019 and 2020.
- Within Nordic countries, Sweden is the clear front-runner, the others are on par with the UK and European average when it comes to impact investing as total of VC funding.
- Yet, impact startups in the United Kingdom received more VC investment than all the Nordic countries combined.
- The Nordics punch well above their weight and could be considered an impact powerhouse, but not yet a global leader.
Myth 2

“In 2020, impact startups accounted for ~10% of all startup job openings in the Nordics. Yet, this has increased 5x in five years ago, and proved resilient in the Covid crisis.”

FALSE

In 2020, impact startups accounted for ~10% of all startup job openings in the Nordics. Yet, this has increased 5x in five years ago, and proved resilient in the Covid crisis.
Job vacancies at impact startups are making up a greater share of all startup openings in the Nordics, up 5x from 2% in 2016 to 10% in 2020.

Percentage of job openings by Nordic startups type (excluding internships)

<table>
<thead>
<tr>
<th>Year</th>
<th>Non impact</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>98%</td>
<td>2%</td>
</tr>
<tr>
<td>2017</td>
<td>97%</td>
<td>3%</td>
</tr>
<tr>
<td>2018</td>
<td>17%</td>
<td>3%</td>
</tr>
<tr>
<td>2019</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>2020</td>
<td>90%</td>
<td>10%</td>
</tr>
</tbody>
</table>
Nordic impact jobs proved resilient during the Covid-19 pandemic. By December impact jobs accounted for 16% of startup job vacancies in the Nordics.

Dataset: 29,485 job openings. Source: The Hub by Danske Bank
Considering startups launched in 2020, impact startups make up 24% of all job openings by this group.

Percentage of job openings (excluding internships) by startup launch year

- 2016: 5% Impact, 95% Non impact
- 2017: 4% Impact, 96% Non impact
- 2018: 14% Impact, 86% Non impact
- 2019: 12% Impact, 88% Non impact
- 2020: 24% Impact, 76% Non impact

Dataset: 29,485 job openings. Source: The Hub by Danske Bank
Key takeaways:

- Job vacancies at impact startups are making up a greater share of all startup openings in the Nordics, up 5x from 2% in 2016 to 10% in 2020.
- Impact startups have shown resilience during the pandemic, claiming an ever larger percentage of total job openings in Nordic startups.
- New startups are more likely to be creating impact jobs. Impact startups launched in 2020 account for 24% of all job openings within this group.
- While currently making up 10% of startup jobs in the Nordics, impact startups are a resilient and scaling job growth engine.

“Impact startups stay small and do not create a significant number of jobs.”
"Impact cannot scale at the rate needed by VCs."

Seed stage impact startups were more likely to raise a Series A round within 36 months (39%), than non impact startups.
Four impact unicorns have already been built in the Nordics: Freyr, Kry, Oatly, and Northvolt.

Cumulative number of unicorns in the Nordics
A fast-growing pipeline of potential future impact unicorns is also emerging in the Nordics.

Cumulative number of potential future unicorns in the Nordics

A potential future unicorn is a private startup, valued between €200M and €800M. Dataset: 34 Nordic potential future unicorns of which Voi, Budbee, ICEYE, Doktor.se, Matsmart - Motatos, Einride and Simple Feast qualified as impact startups. Source: dealroom.co
Seed-stage Nordic impact startups convert to Series A more successfully than non-impact peers: 39% of impact startups raised Series A within 36 months of Seed.

Conversion to Series A by time elapsed since Seed round
Seed is the 1st round between €1-4M; Series A is the 1st round between €4-15M

Median time from Seed to Series A: 18 months

Dataset: 57 Nordic impact companies qualified as Seed-stage companies. 90% of Series A have happened by 36 months after the Seed round, making it a good cutoff for measuring conversion rates. Source: dealroom.co
Looking beyond Series A, we wanted to find out which proportion of impact Seed-stage startups that convert to later-stage rounds. 57 Nordic impact companies that raised a qualifying Seed round between 2010 and 2018 were tracked over their life cycle until April 2021. Conversion rates for rounds 3+ can be affected by small sample size, however, typical conversion trends are followed here too (conversion rate divided by 2 at each round). Startups that fail to graduate to following round either exit, become self-sustainable or close; we don’t know the exact breakdown for this group.
Impact startups involved in capital-intensive manufacturing attract more funding than SaaS and marketplaces model counterparts.

Investment per business model type, excluding Northvolt megarounds

- Manufacturing
- SaaS
- Marketplace & ecommerce

Investment by VC firms per country of startup HQ - EUR Million

- €66M
- €114M
- €141M
- €152M
- €172M
- €182M
- €204M
- €232M
- €285M
- €382M
- €461M
- €545M
- €728M
- €910M

Key takeaways:

- Impact unicorns have been built in the Nordics.
- A fast-growing pipeline of potential future unicorns is also emerging in the region.
- At least 39% of seed-stage Nordic impact startups have gone on to raise a Series A. Compared to 19% of European benchmark (Journey to Series A report, published in 2018).
- There’s no evidence of impact startups inherently lacking the scalability required for traditional VC.

"Impact cannot scale at the rate needed by VCs."
“Within impact, Deep Tech startups are a safer bet.”

Nordic Deep Tech Impact startups have higher and more rapid conversion rates to Series A than non Deep Tech peers.
56% of the Nordic Deep Tech impact companies raise Series A within 36 months of Seed, compared to 32% for other Nordic impact startups.

Conversion to Series A by time elapsed since Seed round
Seed is the 1st round between €1-4M; Series A is the 1st round between €4-15M

Impact Deep Tech conversion %  Impact non Deep Tech conversion %

Median time from Seed to Series A:
- non Deep Tech: 15 months
- Deep Tech: 22 months

As we have seen previously, 39% of Nordic impact startups raises a Series A within 36 months.

The definitions and the methodology that we used to classify Deep Tech company can be found in the glossary. Source: dealroom.co
Nordic Deep Tech impact startups are more likely to successfully raise later rounds of funding than non Deep Tech impact peers.

We wanted to find out the proportions and trajectories of impact Seed-stage deep tech and non-deep tech startups that make it to growth round investment stages. We analysed 41 non deep tech, and 16 deep tech impact companies that raised a qualifying Seed round between 2010 and 2018, and tracked their journey up to April 2021. While these are small sample sizes, stark difference emerged in the conversion trends.

As we have seen previously, 44% of Nordic impact companies manage to raise a Series A, 21% a Series B, and just 9% a Series C round. Source: dealroom.co
Impact Deep Tech companies raise more capital at most funding stages.

Median size of (standardized) funding rounds

- Non Deep Tech
- Impact Deep Tech

<table>
<thead>
<tr>
<th>Stage</th>
<th>Non Deep Tech</th>
<th>Impact Deep Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed</td>
<td>€2M</td>
<td>€2M</td>
</tr>
<tr>
<td>Series A</td>
<td>€6M</td>
<td>€8M</td>
</tr>
<tr>
<td>Series B</td>
<td>€20M</td>
<td>€20M</td>
</tr>
<tr>
<td>Series C</td>
<td>€51M</td>
<td>€74M</td>
</tr>
<tr>
<td>Megarounds</td>
<td>€209M</td>
<td>€727M</td>
</tr>
</tbody>
</table>

Northvolt

In the non Deep Tech group are included startups that are: based in the Nordics, that are not impact and that are not Deep Tech. Source: dealroom.co
Key takeaways:

- 56% of the Nordic Deep Tech impact companies raise Series A within 36 months of raising Seed, compared to just 32% for other Nordic impact startups.
- Nordic Deep Tech impact startups are also more likely to successfully raise later rounds of funding than non-deep tech impact peers.
- Deep Tech impact startups are a ‘safer’ bet compared to other impact companies. In addition, deep tech impact companies also raise more capital at most funding stages.

“Within impact, Deep Tech startups are a safer bet.”
“Nordic impact teams lack commercial experience.”

The founders of every major Nordic impact startup have significant commercial experience, and Nordic corporates and established startups are becoming breeding grounds of entrepreneurial talent.
All the founders of the most valuable Nordic impact startups have prior commercial experience. Some are also serial entrepreneurs.

<table>
<thead>
<tr>
<th>Name</th>
<th>Valuation</th>
<th>Founders</th>
<th>Selected previous roles</th>
<th>Experience</th>
<th>Serial founder</th>
</tr>
</thead>
<tbody>
<tr>
<td>northvolt</td>
<td>€3.0B</td>
<td>Peter Carlsson, Paolo Cerutti</td>
<td>VP Supply Chain Design manager, Purchasing director</td>
<td>Tesla Motors, Nissan Motor, Renault</td>
<td>Amplify Ops</td>
</tr>
<tr>
<td>OATLY</td>
<td>€1.8B</td>
<td>Bjorn Oste, Rickard Oste</td>
<td>VP - Product Management Professor of Applied Nutrition</td>
<td>RSA Security Lund University</td>
<td>Good idea drinks Ceba, Aventure,Croptailor</td>
</tr>
<tr>
<td>FREYR</td>
<td>€1.3B</td>
<td>Tore Ivar Slettemoen, Torstein Dale Sjorveit</td>
<td>Engineer, Managing Partner Head of aluminium metal</td>
<td>Statoil, Cleantech Norway Norsk Hydro</td>
<td>Companybook, Njordr Sarawak Energy Berhad</td>
</tr>
<tr>
<td>kry</td>
<td>€1.0B</td>
<td>Johannes Schildt, Fredrik Jung-Abbou, Josefin Landgard, Joachim Hedenius</td>
<td>Project manager Advisor, online manager CEO, Operations director VP engineering</td>
<td>Stardoll Qapital, Viacom GlossyBox, Faction Skis Videoplaza</td>
<td>Tieday Group Leasify, Fakturino, Lendo MANTLE</td>
</tr>
<tr>
<td>AZELIO</td>
<td>€780M</td>
<td>Jonas Eklind</td>
<td>Project manager</td>
<td>Sustainable Innovation</td>
<td>/</td>
</tr>
</tbody>
</table>
Some of the largest Nordic and global corporations have proved to be important commercial training grounds for impact startup founders.

<table>
<thead>
<tr>
<th>Corporation</th>
<th>Number of founders</th>
<th>Selected startups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nokia</td>
<td>17</td>
<td>Silo AI, Popit, BroadBit Batteries</td>
</tr>
<tr>
<td>Ericsson</td>
<td>13</td>
<td>Ugglo, Unbiased, BySpire</td>
</tr>
<tr>
<td>IBM</td>
<td>11</td>
<td>Eatit, Natural Cycles, CrayoNano</td>
</tr>
<tr>
<td>BCG</td>
<td>11</td>
<td>Hafnium Labs, Hooked Foods, PanCryos IVS</td>
</tr>
<tr>
<td>Siemens</td>
<td>10</td>
<td>Vertikal AI, Pond, Tempiro</td>
</tr>
<tr>
<td>Accenture</td>
<td>8</td>
<td>Renbloc, Isbjorn, Apotea</td>
</tr>
<tr>
<td>Volvo</td>
<td>8</td>
<td>Epishine, Trine AB, ReVibe Energy</td>
</tr>
<tr>
<td>Microsoft</td>
<td>7</td>
<td>Imagilabs, Anyware Solutions, Klimato</td>
</tr>
<tr>
<td>Ørsted</td>
<td>6</td>
<td>Cemgreen, Saltkraft ApS, Wind Power Lab</td>
</tr>
</tbody>
</table>

1) The table is sorted on corporates in which the most founders had previous work experiences. Dataset: 1,594 founders. Source: dealroom.co
The snowball effect in the Nordic startup ecosystem has begun. Startup success stories have produced impact-focused founder alumni.
66% of Nordic impact startup founders have previous professional experience prior to founding a company.

Number of founders per number of previous work experiences

<table>
<thead>
<tr>
<th>Previous work experiences</th>
<th>Number of founders</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>549</td>
</tr>
<tr>
<td>1</td>
<td>465</td>
</tr>
<tr>
<td>2</td>
<td>281</td>
</tr>
<tr>
<td>3</td>
<td>161</td>
</tr>
<tr>
<td>4</td>
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<tr>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
</tr>
</tbody>
</table>

Dataset: 1,594 founders. Source: dealroom.co
Key takeaways:

- All the founders of the most valuable Nordic impact startups have prior commercial experience, some are serial entrepreneurs.
- Some of the largest Nordic and global corporates have proven to be important commercial training grounds for Nordic impact startup founders.
- 66% of Nordic impact startup founders have previous professional experience before founding a company.
- The snowball effect in the Nordic startup ecosystem is building. Startup success stories have produced impact-focused founder alumni.
- In conclusion, there is a young entrepreneurial generation founding impact companies in the Nordics, but there is also a snowball-effect building of experienced corporate and startup talent starting new impact ventures.

“Nordic impact teams lack commercial experience.”
"Impact startups are better at forming stronger and more diverse teams."

Impact startups can form better teams and also benefit from increased founders’ diversity.
Nordic impact startups can fish from a bigger talent pool - they receive 25% more job applications per vacancy than non-impact startups.

Median number of applicants for startups jobs 2016 to 2020 (excluding internships)

- Impact startups: 15 Applicants
- Non-impact: 12 Applicants

Dataset: 29,485 job openings. Source: The Hub by Danske Bank
Nordic impact startup founding teams are predominantly all male, though marginally less so than non-impact founding teams.

80% All male founders

20% Min 1 female founder

Impact

85% All male founders

15% Min 1 female founder

Non impact

Dataset: 5,188 Nordic companies. Source: dealroom.co
In addition, deep tech impact companies have fewer female founders, than to non deep tech counterparts.

Percentage of Nordic startups with at least one female founder

80% Impact startups with all male founders

22% Non Deep Tech impact startups

16% Deep Tech impact startups
Key takeaways:

● Nordic impact startups can fish from a bigger talent pool - they receive 25% more job applications per vacancy than non impact startups.

● Nordic impact startup founding teams are predominantly all male, though marginally less so than non impact founding teams.

● In conclusion, impact startups have the opportunity to form stronger teams and also benefit from increased founders’ diversity.

“Impact startups are better at forming stronger and more diverse teams.”
Green Growth* - a deep dive.

*Green Growth refers to startups specifically seeking to improve environmental conditions as part of their main business activities. Green Growth is therefore an environmentally-focused subset of Impact.
“The Nordic countries each specialise in different Green Growth clusters.”

Sweden leads in all green clusters except in Materials and Resources where Finland takes a lead. Norway punches above its weight in Energy & Utility.
There are five key clusters of operations and focus for Green Growth startups.

**Energy & Utilities**
Renewable energy production, smart- and micro grids, power-to-X, energy storage.
Number of startups: 364
Total funding: €2.1B
Examples:
- tibber
- OTONO
- CORPOWER
- OCEAN
- Clever

**Food & Agriculture**
Improve farming output and quality, alternative protein, waste reduction.
Number of startups: 173
Total funding: €339M
Examples:
- SOLAR FOODS
- karma
- N2 Applied

**Materials & Resources**
Sustainable production resources, packaging materials, fibers.
Number of startups: 76
Total funding: €239M
Examples:
- Spinnova
- ZENTROBOTICS

**Buildings & Infrastructure**
Green and smart buildings and cities, monitoring energy grid & utility systems, green building materials.
Number of startups: 84
Total funding: €152M
Examples:
- Odico
- Loopfront
- VOLTA

**Transport & Mobility**
Electric vehicles, bicycles, smart mobility, public transportation, automated or hyper-efficient systems.
Number of startups: 124
Total funding: €38M
Examples:
- MATE.BIKE
- VOLTA
- URBAN GREEN

Companies addressing more than one cluster are counted in all clusters they address. Total funding data covers the 2018 to 2020 time-frame.
Dataset: 665 companies. Source: dealroom.co
73% of the investment into Green Growth goes to companies working in the Energy & Utilities sector.

Investment into Green Growth according to clusters

- Transportation & Mobility: 1%
- Materials & Resources: 8%
- Food & Agriculture: 12%
- Buildings & Infrastructure: 5%
- Energy & Utilities: 73%
Sweden, with around double the population and GDP, leads in almost every cluster. Norway punches above its weight in Energy & Utilities.

The data above confirms the conclusion of The Danish Ecosystem for startups in green energy and environmental technology (2018) report that “Danish Green Growth startups are not able to raise as much capital compared to other countries’ green startups.” Finland receive 70% of the investment in the Materials & Resources bucket as a result of one late-stage company: ICEYE. Time-frame: 2018 to 2020. Dataset: 665 companies. Source: dealroom.co
Key takeaways:

- 73% of the investment into Green Growth goes to companies working in the Energy & Utilities sector.

- Compared to the other Nordic countries, Sweden has the highest number of startups and the most EUR invested into Green Growth startups. The country is much larger in population and GDP. However, after adjusting for country size, Sweden is still doing significantly better.

- Denmark is often perceived as a green energy giant with companies like Ørsted and Vestas, but the rest of the Nordics are significantly stronger in financing the ecosystem for energy startups: Norway clearly punches above its weight in the Energy & Utilities cluster.

- In conclusion, Sweden leads in all green clusters except in Materials and Resources where Finland takes a leads. Norway punches above its weight in Energy & Utilities.

“The Nordic countries each specialise in different Green Growth clusters.”
“Green growth is more capital intensive than traditional tech.”

Green Growth startups have the same median size for early stage rounds compared to benchmark, increasing from Series B.
What is Green Deep Tech?

"For a startup to earn the "deep tech" label, there must be science or engineering risk in getting the idea to actually work and, assuming it does, risk in proving market demand for that product. If there is only one of these risks, but not both, then we’re not talking about a "deep tech" startup."¹

Green Growth companies are often working at the bleeding edge of science, engineering and innovation in order to solve some of the world’s biggest challenges. In Nordic Green Growth, 35% of all funding goes to Deep Tech startups, compared to ~25% of all European VC.

For any deep tech company, proving your technology and product can be capital intensive. We explore how Green Growth’s Deep Tech tendencies may affect its capital requirements and funding journey.

¹Nathan Benaich - Founder & General Partner of Air Street Capital. ²The above matrix segmentation is inspired by Nicolas Colin.
Half of Nordic Green Growth startups are using existing technologies to meet existing market demand - proven models. The other half are using breakthrough technologies to meet existing and anticipated market demand.

### Green Growth companies distribution

#### Research & Development risk

- **High**
  - R&D intense Green tech: 23%
  - Green Deep Tech: 26%

- **Low**
  - Proven model: 49%
  - New market: 2%

#### Product/Market fit risk

- **Low**
- **High**
Despite making up just 26% of Green Growth, deep tech startups are raising disproportionate levels of investment, as they chase breakthrough innovations.

Total amount of funding raised (ex. Northvolt)

<table>
<thead>
<tr>
<th>R&amp;D risk</th>
<th>Product/Market fit risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Proven model</td>
</tr>
<tr>
<td></td>
<td>€798M</td>
</tr>
<tr>
<td>Low</td>
<td>New market</td>
</tr>
<tr>
<td></td>
<td>€10M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R&amp;D risk</th>
<th>Mean funding raised per Green Growth startup (ex. Northvolt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Proven model</td>
</tr>
<tr>
<td></td>
<td>€2.4M</td>
</tr>
<tr>
<td>Low</td>
<td>New market</td>
</tr>
<tr>
<td></td>
<td>€0.9M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R&amp;D risk</th>
<th>R&amp;D intense Green tech</th>
<th>Green Deep Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>€534M</td>
<td>€719M</td>
</tr>
<tr>
<td>Low</td>
<td>€798M</td>
<td>€10M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R&amp;D risk</th>
<th>R&amp;D intense Green tech</th>
<th>Green Deep Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>€3.5M</td>
<td>€4.2M</td>
</tr>
<tr>
<td>Low</td>
<td>€2.4M</td>
<td>€0.9M</td>
</tr>
</tbody>
</table>

Northvolt is a significant outlier, including it it would have to add €1.5B of funding raised by Green Deep Tech companies. Dataset: 665 companies. Source: dealroom.co
But Green Growth startups do not require additional capital for validation at early stage. Green Growth startups raise comparable round sizes up to Series B+.

Median size for round types

All other startups | Green Growth
---|---
Pre Seed | €0.1M | €0.1M
Seed | €2.0M | €2.0M
Series A | €6.8M | €7.1M
Series B | €20M | €22M
Series C | €48M | €60M

Dataset: 11,031 Nordic startups. Source: dealroom.co

All other startups include non impact companies and impact companies that are not Green Growth.
Key takeaways:

- Green Growth companies are an heterogeneous group, to understand them better we classified them according to their Research & Development and Product/Market fit risks.
- Deep Tech accounts for a greater share of investment within Nordic Green Growth than in the overall European startup ecosystem.
- Green Growth Deep Tech startups raise a disproportionate levels of investment, and large round sizes than non Deep Tech peers.
- Green Growth on average do not require more validation capital at early stage compared to all other startups. They have the same median round sizes at early stage compared to non Green Growth companies, with round sizes increasing from Series B.

“Green Growth is more capital intensive than traditional tech.”
“Green Growth startups are heavily dependent on public funding at early stage.”

In the Nordics, public funding is highly concentrated prototype and go-to-market stage, making up 46% of seed stage funding, and Green Growth startups are more likely to receive grant funding compared to benchmark.
Public funding for Nordic Green Growth startups has grown 4.6x since 2016.

Public investment into Green Growth startups

<table>
<thead>
<tr>
<th>Year</th>
<th>Investment (€M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>23</td>
</tr>
<tr>
<td>2017</td>
<td>26</td>
</tr>
<tr>
<td>2018</td>
<td>21</td>
</tr>
<tr>
<td>2019</td>
<td>60</td>
</tr>
<tr>
<td>2020</td>
<td>106</td>
</tr>
</tbody>
</table>

Dataset: 665 companies. Source: dealroom.co
However, private market funding has poured in at pace in the last five years, increasing 18x in 5 years.

Green Growth startup investment by funding source

- Private funding
- Public funding

Northvolt €910M
€545M

Source: dealroom.co
In the Nordics, public funding is highly concentrated at early stage, making up 46% of seed-stage funding.

<table>
<thead>
<tr>
<th></th>
<th>Pre Seed</th>
<th>Seed</th>
<th>Series A</th>
<th>Series B</th>
<th>Series C</th>
<th>Megarounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>49%</td>
<td>63%</td>
<td>15%</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Norway</td>
<td>46%</td>
<td>74%</td>
<td>4%</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Sweden</td>
<td>34%</td>
<td>31%</td>
<td>15%</td>
<td>3%</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Finland</td>
<td>21%</td>
<td>49%</td>
<td>20%</td>
<td>/</td>
<td>6%</td>
<td>/</td>
</tr>
<tr>
<td>Nordics</td>
<td>36%</td>
<td>46%</td>
<td>13%</td>
<td>1%</td>
<td>2%</td>
<td>/</td>
</tr>
</tbody>
</table>

Grants have also been included in this analysis. Dataset: 665 startups. Source: dealroom.co
Green Growth startups are also more likely to attract public funding compared to non Green Growth startups, especially at Seed and Series A stage.

Index comparison between public funding for Green Growth companies vs. non Green Growth companies

<table>
<thead>
<tr>
<th></th>
<th>Pre Seed</th>
<th>Seed</th>
<th>Series A</th>
<th>Series B</th>
<th>Series C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Denmark</strong></td>
<td>126</td>
<td>144</td>
<td>176</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td><strong>Norway</strong></td>
<td>111</td>
<td>170</td>
<td>54</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td><strong>Sweden</strong></td>
<td>112</td>
<td>159</td>
<td>528</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td><strong>Finland</strong></td>
<td>101</td>
<td>154</td>
<td>307</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td><strong>Nordics</strong></td>
<td>112</td>
<td>157</td>
<td>253</td>
<td>24</td>
<td>/</td>
</tr>
</tbody>
</table>

Dataset: 11,031 Nordic startups. Indexed at 100: if above 100 Green Growth startups have a higher ratio of public funding / total VC investments. Grants have also been included in this analysis. Time frame: 2016 to 2020. Source: dealroom.co
The European Innovation Council (EIC) is the leading funding source for Nordic Green Growth companies, with average ticket sizes of €1.1M.

<table>
<thead>
<tr>
<th>Investor name</th>
<th>Investor type</th>
<th>HQ</th>
<th>Amount invested</th>
<th>Average ticket size</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Innovation Council</td>
<td>Governmental</td>
<td>Brussels, Belgium</td>
<td>€ 140 M</td>
<td>€ 1.1 M</td>
</tr>
<tr>
<td>Balderton Capital</td>
<td>Venture Capital</td>
<td>London, United Kingdom</td>
<td>€ 45 M</td>
<td>€ 8.9 M</td>
</tr>
<tr>
<td>RAINE</td>
<td>Venture Capital</td>
<td>New York, United States</td>
<td>€ 38 M</td>
<td>€ 9.5 M</td>
</tr>
<tr>
<td>CREANDUM</td>
<td>Venture Capital</td>
<td>Stockholm, Sweden</td>
<td>€ 36 M</td>
<td>€ 7.1 M</td>
</tr>
<tr>
<td>Inbox Capital</td>
<td>Venture Capital</td>
<td>Stockholm, Sweden</td>
<td>€ 26 M</td>
<td>€ 8.6 M</td>
</tr>
<tr>
<td>almi</td>
<td>Governmental</td>
<td>Stockholm, Sweden</td>
<td>€ 24 M</td>
<td>€ 1.0 M</td>
</tr>
<tr>
<td>Breakthrough Energy</td>
<td>Venture Capital</td>
<td>Boston, United States</td>
<td>€ 23 M</td>
<td>€ 11 M</td>
</tr>
</tbody>
</table>

1) Estimated total amount of investment into Green Growth startups. This amount is calculated on an equal split of the transaction amount by the number of investors. Investment up to standardized Series A round (€15M) has been taken into account for this analysis. Time-frame: 2016 to 2020. Dataset: 665 startups. Grants have also been included in this analysis. Source: dealroom.co
Government funders make up 5 of the top 8 most active funders of Nordic Green Growth startups.

<table>
<thead>
<tr>
<th>Investor name</th>
<th>Investor type</th>
<th>HQ</th>
<th>Number of rounds</th>
<th>Average ticket size</th>
<th>Selected supported companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Innovation Council</td>
<td>Governmental</td>
<td>Brussels, Belgium</td>
<td>125</td>
<td>€ 1.1 M</td>
<td>AZELIC, AMMINEX, TACTOTEK</td>
</tr>
<tr>
<td>almi</td>
<td>Venture Capital</td>
<td>Stockholm, Sweden</td>
<td>24</td>
<td>€ 1.0 M</td>
<td>CORPOWER G, RENEWCELL</td>
</tr>
<tr>
<td>eurostars</td>
<td>Governmental</td>
<td>Brussels, Belgium</td>
<td>19</td>
<td>€ 0.3 M</td>
<td>ICEYE, SEABORG, CLIMEON</td>
</tr>
<tr>
<td>BUSINESS FINLAND</td>
<td>Governmental</td>
<td>Helsinki, Finland</td>
<td>15</td>
<td>€ 1.4 M</td>
<td>ICEYE, SOLAR FOODS</td>
</tr>
<tr>
<td>&lt; norrsken &gt;</td>
<td>Venture Capital</td>
<td>Stockholm, Sweden</td>
<td>15</td>
<td>€ 1.3 M</td>
<td>EINRIDE, KARMA</td>
</tr>
<tr>
<td>LIFELINE</td>
<td>Venture Capital</td>
<td>Helsinki, Finland</td>
<td>13</td>
<td>€ 1.7 M</td>
<td>ICEYE, SOLAR FOODS, SULAPAC</td>
</tr>
<tr>
<td>VENTURE</td>
<td>Governmental</td>
<td>Hellerup, Denmark</td>
<td>10</td>
<td>€ 1.0 M</td>
<td>Micro Shade, NORDIC HARVEST</td>
</tr>
<tr>
<td>EIT</td>
<td>Governmental</td>
<td>Eindhoven, Netherlands</td>
<td>10</td>
<td>€ 1.4 M</td>
<td>Northvolt, CORPOWER, SUNROOF</td>
</tr>
</tbody>
</table>

1) This amount is calculated on an equal split of the transaction amount by the number of investors. Investment up to standardized Series A round (€15M) has been taken into account for this analysis. Time-frame: 2016 to 2020. Dataset: 665 startups. Grants have also been included in this analysis. Source: dealroom.co
Since 2016, public funding into Green Growth startups grew 4.6x to a total of €106M in 2020 compared to private investment which grew 18x times.

Regarding Green Growth startups, public investment is highly concentrated in the early-stage segment making up 46% of seed stage funding.

Green Growth startups are more likely to attract public funding compared to non impact Nordic startups, especially at seed and Series A stage.

The European Innovation Council (EU) is the leading funding body in the early stage for estimated amount invested as well as for number of rounds.

We can conclude that Green Growth startups are dependent on public funding especially in prototype and going-to-market stage, but that private funding is increasingly backing validated projects to scale.

Key takeaways:

“Green Growth startups are heavily dependent on public funding at early stage.”
VC investment into Green Growth startups doubled between 2019 and 2020, and has grown 12x since 2016.
2020 was a record year for the amount of VC investment into Green Growth startups, doubling since 2019, and growing 12x since 2016.
Swedish Green Growth startups raise 60% of all Nordic Green Growth VC investment.

Investment by VC firms per country of startup HQ

- Denmark
- Norway
- Finland
- Sweden

- **2016**: €1M
  - Denmark: €1M
  - Norway: €25M
  - Finland: €3M
  - Sweden: €40M

- **2017**: €3M
  - Denmark: €3M
  - Norway: €40M
  - Finland: €32M
  - Sweden: €55M

- **2018**: €21M
  - Denmark: €17M
  - Norway: €55M
  - Finland: €72M
  - Sweden: €219M

- **2019**: €219M
  - Denmark: €30M
  - Norway: €126M
  - Finland: €30M
  - Sweden: €384M

- **2020**: €28M
  - Denmark: €30M
  - Norway: €126M
  - Finland: €30M
  - Sweden: €384M

Dataset: 665 companies. Source: dealroom.co
VC firms account for around half of all investment in every clusters, apart from Energy & Utility, where strategic corporate investments have made up 38%.

### Percentage of total investment (2016 to 2020) into Green Growth clusters by investor’ entity type

<table>
<thead>
<tr>
<th></th>
<th>Buildings &amp; Infrastructure</th>
<th>Energy &amp; Utility</th>
<th>Food &amp; Agriculture</th>
<th>Materials &amp; Resources</th>
<th>Transportation &amp; Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angel</td>
<td>11%</td>
<td>14%</td>
<td>9%</td>
<td>1%</td>
<td>8%</td>
</tr>
<tr>
<td>Public funding</td>
<td>20%</td>
<td>21%</td>
<td>22%</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>VC firms</td>
<td>44%</td>
<td>22%</td>
<td>54%</td>
<td>66%</td>
<td>69%</td>
</tr>
<tr>
<td>Corporate</td>
<td>16%</td>
<td>38%</td>
<td>12%</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>CVC</td>
<td>9%</td>
<td>5%</td>
<td>2%</td>
<td>9%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Northvolt’s megarounds have been excluded from this table. Other investor entities include Accelerators and Private Equity firms, these have been excluded from the table as they make up less than 2% of the total investment. Dataset: 665 companies. Source: dealroom.co
Key takeaways:

- 2020 was a record year for the amount of VC investment into Green Growth startups, 2x higher compared to 2019 and 12x higher than 2016.
- Sweden account for ~60% of total investment by VC firms into Nordic Green Growth startups.
- VC firms account for half of the investment or more in all clusters, aside from Energy & Utilities as a result of corporate involvement in Northvolt megarounds.

“VCs don’t invest in Green Growth”
“Corporate investors are particularly active in Green Growth.”

Green Growth startups receive double the proportion of funding from Corporate investors as non Green Growth startups.
Corporate investment in Nordic Green Growth startups has increased 14x since 2016.

Investment into Nordic Green Growth startups by investor type

Corporate venture capital (CVC)

- Northvolt: €910M
- 2016: €20M
- 2017: €49M
- 2018: €64M
- 2019: €64M
- 2020: €303M

Investors in the highlighted Northvolt megaround include Volkswagen and Goldman Sachs. Dataset: 665 companies. Source: dealroom.co
Green Growth startups receive more corporate investment than non Green Growth startups, with a higher share of corporate capital coming from international investors.

Non Green Growth startups include non impact companies and impact companies that are not Green Growth. Time-frame: 2016 to 2020.

Other includes other investors types such as Venture Capital firms, governments, accelerators, non-profits. Dataset: 11,031 Nordic startups. Source: dealroom.co
Green Growth startups attract investment from global corporates and brands.

<table>
<thead>
<tr>
<th>Corporate</th>
<th>HQ</th>
<th>Key focus areas</th>
<th>Selected Nordic investments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volkswagen Group</td>
<td>Wolfsburg Germany</td>
<td>Automotive, energy</td>
<td>Northvolt</td>
</tr>
<tr>
<td>Roc Nation</td>
<td>New York United States</td>
<td>Music, sport, fashion</td>
<td>Oatly</td>
</tr>
<tr>
<td>H&amp;M</td>
<td>Stockholm Sweden</td>
<td>Fashion, beauty, fintech</td>
<td>Budbee, Re:newcell, Sellpy, Infinite Fiber</td>
</tr>
<tr>
<td>BP</td>
<td>London United Kingdom</td>
<td>Energy, transportation</td>
<td>Mass Global, Norsepower</td>
</tr>
<tr>
<td>Equinor</td>
<td>Stavanger Norway</td>
<td>Energy</td>
<td>Beyonder AS, eSmart Systems</td>
</tr>
<tr>
<td>ABB</td>
<td>Zurich Switzerland</td>
<td>Industrial tech</td>
<td>Northvolt</td>
</tr>
<tr>
<td>E.ON</td>
<td>Essen Germany</td>
<td>Energy</td>
<td>Virta, eSmart Systems</td>
</tr>
</tbody>
</table>

1) Selection of global corporates that invested into Nordic Green Growth companies based on estimated amount invested, financial institutions e.g. Goldman Sachs have been excluded. Dataset: 665 companies. Source: dealroom.co
Key takeaways:

- Corporate investment into Green Growth companies increased 14 times compared to 2016.
- Green Growth startups receive double the proportion of funding from Corporates and CVCs compared to non Green Growth companies.
- Nordic Green Growth startups also attract a higher proportion of foreign investment from corporate investors compared to other investor groups.
- Nordic Green Growth startups attract significant investment from global corporates and brands.

“Corporate investors are particularly active in Green Growth.”
About the report, methodology, and data.
Methodology & Dataset

Number of startups in each report dataset

- 2018: 317
- 2019: 647
- 2020: 1,018
- 2021: 1,230

Number of startups in each region:

- Sweden: 33%
- Denmark: 32%
- Finland: 20%
- Norway: 15%

Source: dealroom.co
Glossary

What is a startup?
“Startup is a company designed to grow fast” [1]

What is an impact startup?
A startup company that addresses one or more of the UN Sustainable Development Goals (SDGs) at the core of its business. Our litmus test: If you remove the impact you also remove the business. Within the context of the EU Sustainable Finance package, the report focuses on companies and products with “environmental objectives”, as in Article 9 in the EU Sustainable Finance Regulation, and those that significantly contribute to a sustainability objective in the EU taxonomy.

What is a Green Growth startup?
Green Growth is a subset of impact startups. They not only addresses SDGs in general, but in particular seeks to improve environmental conditions as part of its main business activities. In other words, the more a Green Growth company scales, the more environmental parameters should improve. This may be through the reduction of greenhouse gas emissions, resource consumption, and/or through regenerative practices that lead to gradual restoration of damaged ecosystems.

What is a Deep Tech startup?
Deep Tech includes startups working on innovative technologies that are closely linked to the frontiers of science and engineering. These companies inherently take on risk relating to the feasibility of their technologies, and well as the risk in proving market demand for the product which has likely not been seen before in the market. Deep Tech startups often start with extended R&D phase, have a higher share of technical staff and involve hardware and/or IP.

What is an impact Deep Tech startup?
An impact Deep Tech company fits both the criteria for being an impact startup and a deep tech startup.

What is a Green Deep Tech startup?
A Green Deep Tech company qualifies for being both a Green Growth startup and a Deep Tech startup.

What is Research & Development (R&D) risk?
We classified the R&D risk based on the following (an affirmative response indicates low risk):

- Is the technology market mature?
- Does it require less than €100K to develop a prototype?
- Does it require less than 2 years to develop a marketable prototype?

Which criteria did you use to classify Product/Market fit risk?
We classified Product/Market fit risk based on the following (an affirmative response indicates low risk):

- Is there an established demand in the market?
- Is there any listed company selling a similar product or device?
- Does infrastructure, legislation, and other systemic dependencies exist to support the product or service?
Venture capital methodology & definitions.

Startups, scaleups, grownups and tech

Companies designed to grow fast. Generally, such companies are VC-investable businesses. Sometimes they can become very big (e.g. $1B+ valuation).

When startups are successful, they develop into scaleups (>50 people), grownups (>500 people) and result in big companies, like Kry or Northvolt.

In this report, the term “tech ecosystem” refers to startups, scaleups grownups from different vintages/cohorts. Only companies founded after 1990 are included in this report.

Venture capital investment

Investment numbers refer to rounds such as seed, series A, B, C, ..., late stage, and growth equity rounds.

Venture capital investment figures exclude debt or other non-equity funding, lending capital, grants and ICOs.

Buyouts, M&A, secondary rounds, and IPOs are treated as exits: excluded from funding data.

Investment rounds are sourced from public disclosures including press releases, news, filings and verified user-submitted information.

Valuation

The combined valuation of the tech ecosystem is based on their market cap or latest transaction value. Market share price taken on May 1st, 2021.

Transaction value is realised from exit or implied unrealised valuation from the latest VC round, which is either announced or estimated by Dealroom based on benchmarks.

Data source

Dealroom’s proprietary database and software aggregate data from multiple sources: harvesting public information, user-generated data verified by Dealroom, data engineering. All data is verified and curated manually.

Most underlying data from the report is available online via impact.dealroom.co

Job opening data has been made available by The Hub by Danske Bank.

For more info please visit dealroom.co or contact support@dealroom.co