newnordics AI

AI full stack mapping

New Nordic capabilities across the AI full stack

Key findings

The widest choice of New Nordic alternatives to global providers is in data center infrastructure, data platforms and applications, while AI computing, foundation models and AI tooling have only a few

The study identified **several mature, Fully New Nordic providers** on each of these three layers, and also in cloud computing, *though none there at the scale of the global platforms*. In model fine-tuning and hosting it found none. The region also **depends on outside suppliers** for general-purpose foundation models and for AI chips, which were not part of the mapping.

The same strong layers, data center infrastructure, data platforms and AI applications, are also where the study found New Nordic providers already serving paying customers in production

The New Nordics has **several established data center operators.** In addition, data platform providers cover a range of customer needs, from data management and governance to machine learning and commercial data feeds. Among application providers, coverage within the scope of the study is strongest in **customer service and conversational AI** among horizontal applications, and **health and energy** among the vertical sectors examined.

In cloud computing, New Nordic providers are able to serve workloads but do not reach the scale and service offering of the large international players

In cloud computing, **several established New Nordic providers can serve production workloads.** However, they *do not yet match the global hyperscalers in scale or breadth of service offering*, and customers with **large-scale or advanced workloads** therefore continue to depend on the hyperscalers.

Layers that are likely to be sourced largely from outside the New Nordics include computing chips, AI computing, general-purpose foundation models, and AI tooling and orchestration

In AI computing, *a few New Nordic providers exist*, but **none yet operate at the scale of the global players.** New Nordic providers have also built foundation models, although these are **language- or domain-specific**, so **general-purpose models are still sourced from outside the region.** No mature New Nordic provider of model fine-tuning and hosting was identified. AI tooling and orchestration is *thin as a standalone layer*: of the **13 companies identified, six are mature and only four of those are also Fully New Nordic.** Semiconductor supply falls outside the scope of this study, but it remains **an absolute dependency underlying the entire stack.**

As part of its work on European technological autonomy, the EU has a proposal in progress, the Cloud and AI Development Act (CADA)

CADA aims to promote **European autonomy in AI** through a single EU-wide framework for assessing cloud and AI sovereignty, covering topics such as **data location, independence from third countries, and ownership** of the AI solution provider. Against the data sample, most New Nordic providers would meet the corresponding elements of the framework at EU/EEA level: **around 70%** of those whose data location could be identified name only EU/EEA locations, and in every layer **over 70%** have their jurisdiction and **over 60%** their majority ownership within the EU/EEA.

New Nordic capabilities across the AI full stack

Throughout the development of AI, the New Nordic countries have depended largely on providers outside the region. In recent years, that dependency has moved *from a procurement question to a risk management one*, as the changing geopolitical environment has brought new questions to the surface: "Who has access to our data?", and "Under whose law is our contract interpreted?" **Independence in AI providers and technology** has been gaining importance as a result, especially in fields that hold sensitive data.

Beyond risk management, such independence is also a question of **resilience and global competitiveness.** The New Nordic and European countries have lagged behind, for example, the United States and China, which are home to several global AI market leaders. This study examines at which layers New Nordic providers can already serve real production workloads at realistic scale, which layers work for limited use cases but do not cover the full requirement, and which parts of the stack are *likely to be sourced from outside the New Nordics in the coming years*.

The AI full stack covers layers from data center infrastructure and computing capacity through data platforms, foundation models and tooling to finished applications. New Nordic capabilities vary considerably across them. Coverage is concentrated in applications, which account for **over half of the companies in the sample**, and in data center infrastructure and data platforms, which account for **one fourth.** Computing capacity, foundation models and the tooling that connects models to products account for the rest.

Of the layers mapped, New Nordic providers can already supply three at production scale: data center infrastructure, data platforms and applications. Cloud computing can be sourced from the region for most workloads, though not at the scale of the global platforms, while AI computing, foundation models and AI tooling will largely come from outside the New Nordics in the coming years.

Data center infrastructure and data platforms are **among the strongest layers in the New Nordics.** Of the 60 companies identified across the two, **seven in ten qualify as mature**, meaning they sell a ready product directly to customers and reach the scale threshold set for

their layer. **Nearly half are both mature and Fully New Nordic**, with headquarters, majority ownership and jurisdiction all in the New Nordics, meaning buyers have regional providers to choose from on both layers.

Data centers are, however, also where *New Nordic ownership is the thinnest*: **only three in five** of the companies identified are New Nordic-owned. Several of the largest specialized operators are foreign-owned. This is likely to reflect the benefits a New Nordic location offers, which attract operators to the region even when the owner sits elsewhere: renewable energy at competitive prices, a climate that lowers cooling costs, and established fiber connectivity. The operators fall into two groups: incumbent telecom and infrastructure companies running data centers alongside other businesses, and specialized colocation and high-performance computing operators.

On the data platform layer, **nearly 90% of the companies identified are Fully New Nordic.** They cover the range a buyer would need rather than a single niche, including master data management and governance platforms, search and machine learning infrastructure, and commercial data providers.

At the other end of the stack, **applications emerge as a second area of strength**, and many of them can be bought from a mature New Nordic provider today. Applications account for **over half** of the companies identified, and vertical applications account for **70%** of the application providers. *Horizontal applications*, such as customer service automation or document processing, work across industries. *Vertical applications*, on the other hand, are built for one sector and its specific workflows, data and regulation.

Ownership of the application providers runs the opposite way to data centers: **nearly 90% of application companies are New Nordic owned**, *the highest share of any sizeable layer*. **Nearly one third are both mature and Fully New Nordic.**

Horizontal application providers cluster in a set of categories, dominated by **customer service and conversational AI**, followed by document processing, content moderation and sales automation.

Among vertical applications, the study focuses on **five sectors:** health and pharmaceuticals, energy, manufacturing, engineering and construction, defense, security and space, and cultural and creative industries. **Health and pharmaceuticals is the largest**, with **around 40%** of the vertical application companies in the layer, covering diagnostic support, clinical documentation, imaging and drug discovery. Energy follows, covering grid monitoring, flexibility management, forecasting and network inspection. Manufacturing as well as defense, security and space have a smaller but functioning base. Cultural and creative industries are the smallest of the five. *Physical AI, meaning robotics and autonomous systems, is outside the scope of this study*, and its exclusion is likely to affect manufacturing and defense in particular.

A layer that *works for limited use cases but does not cover the full requirement* is cloud computing, meaning general-purpose platform capacity for compute, storage and networking. On the cloud computing layer, there are 15 companies, of which **nearly half are both mature and Fully New Nordic**, so commercially viable regional alternatives do exist. Compared with the largest providers on the market, however, their computing capacity and range of managed services are *considerably narrower than those of the*

global platforms. This layer also has Partly New Nordic providers, which meet some but not all of the three criteria (HQ, ownership, jurisdiction in the New Nordics).

The layers that are **likely to be sourced largely from outside the New Nordics** include **computing chips, AI computing, AI tooling and general-purpose foundation models.** In AI computing, meaning rented specialized computing capacity such as GPUs for training and running AI models, *only a few providers are identified in the region*, although a few are beginning to reach regional scale. Foundation model development is similarly narrow: the providers identified are few, and while most of them are both mature and Fully New Nordic, all build models specific to a language or a domain, such as Nordic and Baltic languages, speech or clinical text. **General-purpose models therefore have to be sourced from outside the region.**

AI tooling and orchestration covers the tools and platforms that manage and monitor models in production and connect a foundation model to a finished product. It is thin as a standalone layer in the New Nordics, *possibly in part because much of this work is done inside companies* rather than bought from a separate provider. Providers of this kind operate at scale outside the region, but **fewer than half of the companies identified in the New Nordics are mature, so these tools are largely sourced from elsewhere.**

At EU level, policy has also begun to focus on independence in AI. The European Union currently has a proposal in progress, the **Cloud and AI Development Act (CADA).** Its objectives are to support research, development and innovation in European AI and cloud technologies, to increase computing capacity in Europe, and to promote autonomy by introducing a **single EU-wide framework for assessing cloud and AI sovereignty.** The framework has four assurance levels:

— **Level 1:** Data is processed and stored in infrastructure **located in the EU**

— **Level 2:** The provider is **independent from third countries** and has transparency over its software supply chain

— **Level 3:** The provider is **owned and controlled from the EU** and meets potential additional criteria, such as personnel citizenship

— **Level 4:** The provider has **full control over its software supply chain** and is free from third-country interference

The framework would govern public procurement. It would apply to EU institutions and to public sector bodies in the Member States, and it would determine what they are allowed to buy: **level 1 as a minimum for all public cloud procurement**, and **level 2, 3 or 4** for activities identified as critical to public order. On the supplier side, it would cover services sold as computing capacity, such as cloud platforms, rented GPU capacity, managed data platforms and models run as a service. Its definition of a cloud computing service is taken from the NIS2 Directive, which also covers software delivered as a service, and the proposal includes remotely hosted AI systems, so the tooling and application layers *may also fall within its scope*. Software installed on the customer's own premises, licensed models and data center services such as colocation *would appear to fall outside its scope*. For this study, CADA would apply to AI and cloud

computing, data platforms and foundation models, and *possibly* to AI tooling and orchestration and to applications delivered as a service. Data center infrastructure would appear to fall outside its scope.

In the study, the data location could be identified for about half of the companies. **Only five of them keep all customer data, including data handled by subprocessors, within the New Nordics.** Storage in the region is nevertheless offered by **all identified providers in AI and cloud computing and in foundation models.** On data platforms, AI tooling and applications, around half state only that data is kept in the EU or the EEA without naming the country, and around a third name only countries outside the New Nordics.

It is worth noting, however, that CADA would require data to remain within the Union, not within the New Nordics. A provider processing data elsewhere in the EU would meet the requirement. Norway and Iceland are not EU Member States; for providers and data there, this depends on the act being incorporated into the EEA Agreement. Of the companies where the location could be identified, **around 70% name only locations within the EU or the EEA.** In cloud computing the share is under half, as eight of the 15 providers also offer regions outside the EEA or use subprocessors located outside it, although **all 15 offer data storage in the New Nordics.**

For the independence element of assurance level 2, the rates are higher than for data location: in every layer, **over 60%** of the companies are independent from countries outside the New Nordics, and **over 70%** are independent from countries outside the EU/EEA. Independence is measured through the jurisdiction country, meaning that the contracting entity is incorporated in one of the eight New Nordic countries, or elsewhere in the EU/EEA, with no foreign parent able to compel access to data. For the ownership element of level 3, the rates are also high: **over half** in every layer are majority-owned by the New Nordics, and **over 60%** in the EU/EEA. Ownership is defined as more than **50%** of voting rights held by owners domiciled in the eight New Nordic countries, or elsewhere in the EU/EEA. For level 4, third-country interference and the software supply chain were not in the scope of this study.

Fully New Nordic and mature companies by layer

L1	9
L2A	2
L2B	7
L3	19
L4A	4
L5	4
L6A	14
L6B	32
GRAND TOTAL	91

What it takes to run AI: eight layers from infrastructure to services

How much of it can **New Nordic providers** supply?

AI full stack frame-work

- APPLICATIONS AND SERVICES
- FOUNDATION MODELS AND TOOLING
- DATA AND COMPUTING
- INFRA AND HARDWARE

- IN PROJECT SCOPE
- OUT OF SCOPE

7 Services
- AI Integration services
- Consulting
- Training

6 Applications
- 6a Horizontal applications
- 6b Vertical applications

5 AI tooling and orchestration
- AI tooling, orchestration & MLOps

4 Foundation models
- 4a Foundation model development and training
- 4b Foundation model fine-tuning and hosting

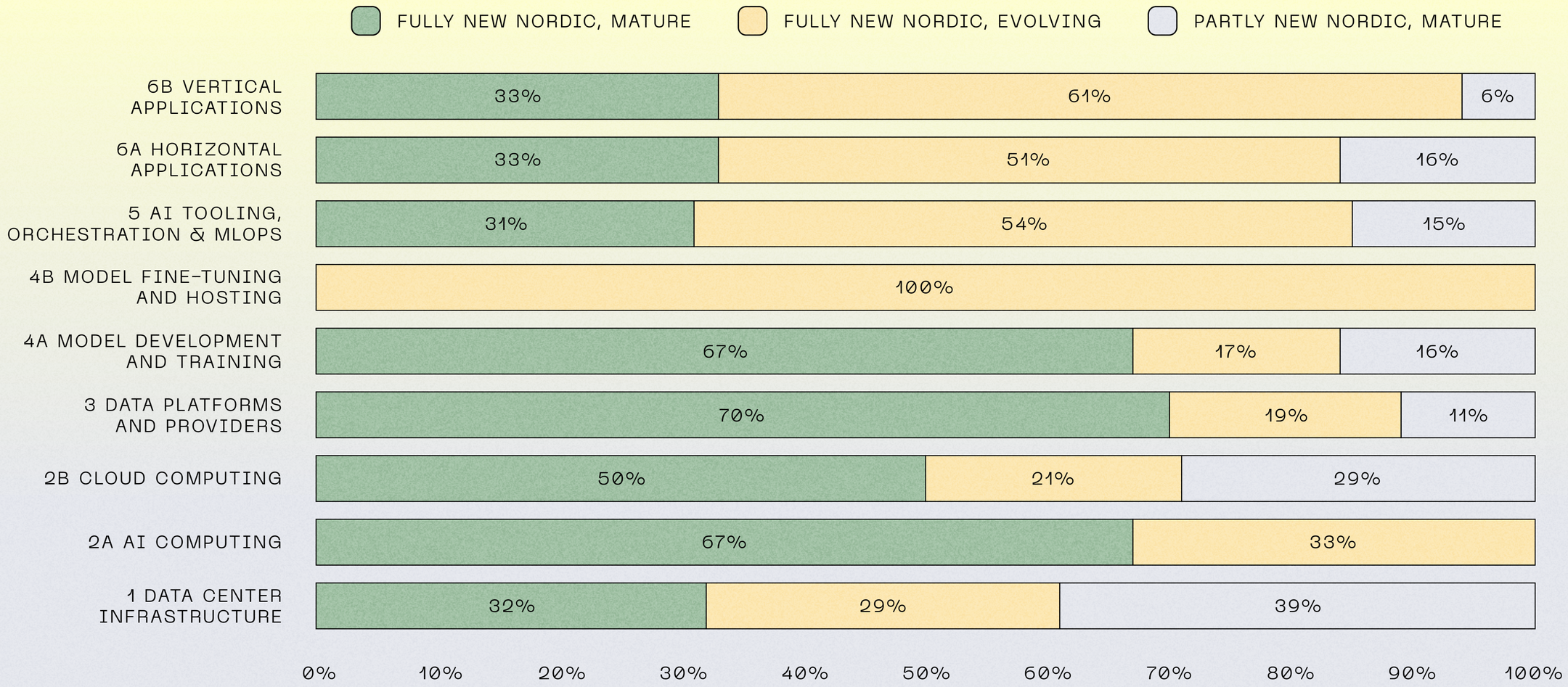
3 Data platforms
- Data platforms and providers

2 Computing platforms
- 2a AI computing
- 2b Cloud computing

1 Data center infrastructure
- Data center infrastructure

0 Base dependency: general infrastructure and computing chips
- Power generation, electricity distribution grids etc.
- Semiconductor chips (CPUs, GPUs)

Maturity and New Nordic grade, by layer



Infra and hardware

0 Base dependency: general infrastructure and computing chips

OUT OF SCOPE

Semiconductor chips (CPUs, GPUs) designed and manufactured for AI and cloud computing, power generation and electricity distribution grids, and general telecom and fiber infrastructure.

CUSTOMER CONTRACTS FOR

Chip supply agreement (volume purchase or OEM contract); power and connectivity supply

1 Data center infrastructure

Physical capacity inside a data center: space, power, cooling and connectivity

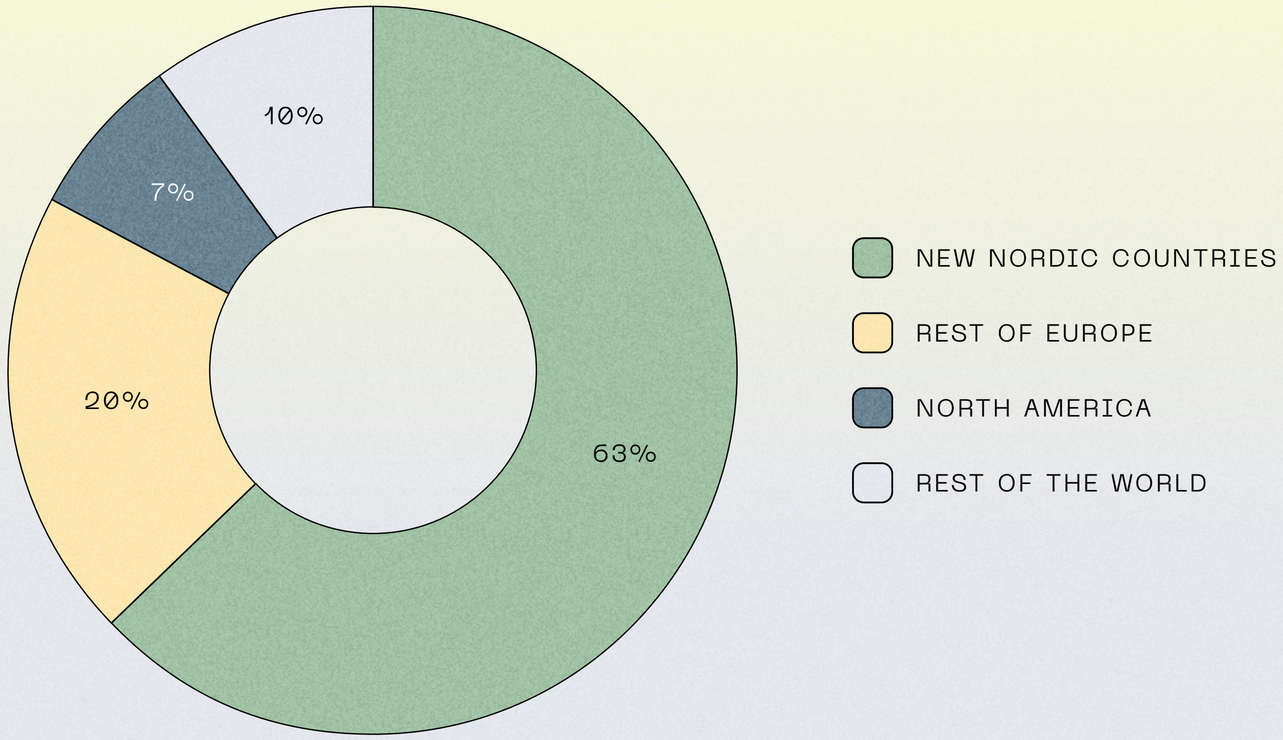
CUSTOMER CONTRACTS FOR

Rack space and power, cross-connects, fiber and transit capacity

FULLY NEW NORDIC AND MATURE COMPANIES

- DK GlobalConnect
- FI Elisa (ALSO AT L2B), Suomen Huoltovarmuusdata (ALSO AT L2B)
- LV Tet (ALSO AT L2B)
- LT Baltneta (ALSO AT L2B)
- NO Bulk Infrastructure
- SE EcoDataCenter, Telia Company, Scandinavian Data Centers

Data center companies by owners' home region



Data and computing

2a AI computing

Rented, specialized computing capacity (e.g. GPUs) for training and running AI models

CUSTOMER CONTRACTS FOR

Dedicated hardware capacity, reserved clusters, node-hours

FULLY NEW NORDIC AND MATURE COMPANIES

- DK DCAI
- FI Verda

2b Cloud computing

General-purpose cloud platform for compute, storage and networking

CUSTOMER CONTRACTS FOR

Consumption-based platform services

FULLY NEW NORDIC AND MATURE COMPANIES

- FI UpCloud
- LT Cherry Servers
- NO Intility
- SE Binero (ALSO AT L1), Cleura, Elastx, Safespring

3 Data platforms and providers

Services for storing, organizing and preparing data, as well as companies that supply data itself, such as training datasets or synthetic data

CUSTOMER CONTRACTS FOR

Platform license or subscription; datasets

FULLY NEW NORDIC AND MATURE COMPANIES

- DK Accutics, aPureBase, CluedIn, Stibo Systems
- EE Supervisely (ALSO AT L5)
- FI Ellie.ai, Profium
- IS DataCentral, Treble Technologies (ALSO AT L5)
- LT Okredo, Oxylabs
- NO Vespa.ai (ALSO AT L5)
- SE Devant, Hopsworks (ALSO AT L5), inorigo, Kognic, Millistream Market Data, Mimer Information Technology, Validio

Foundation models and tooling

4a Model development and training

Models built from scratch, including pre-training on large datasets, such as language- and domain-specific models

CUSTOMER CONTRACTS FOR

Model license

FULLY NEW NORDIC AND MATURE COMPANIES

- DK Alvenir, Corti (ALSO AT L6B)
- IS Miðeind (ALSO AT L6A)
- LV Tilde (ALSO AT L6A)

4b Model fine-tuning and hosting

Adapted or customized versions of existing foundation models, hosted and served ready for use

CUSTOMER CONTRACTS FOR

API access, hosted inference

NO MATURE NEW NORDIC PROVIDER IDENTIFIED

5 AI tooling, orchestration & ML operations

Tools and platforms for managing and monitoring models in production and connecting the AI foundation model to a finished product

CUSTOMER CONTRACTS FOR

Tooling license or subscription

FULLY NEW NORDIC AND MATURE COMPANIES

- IS Videntifier Technologies (ALSO AT L6B)
- LT Neurotechnology, nexos.ai
- SE Ekkono Solutions

Applications and services

6a Horizontal applications

Finished AI products usable across industries, such as customer service agents, enterprise search and knowledge assistants, document generation, app and website builders, and sales automation.

CUSTOMER CONTRACTS FOR

End-user product or SaaS subscription

FULLY NEW NORDIC AND MATURE COMPANIES

- DK Certainly, Karla, raffle.ai
- EE Salesforge.ai
- FI giosg, Utopia Analytics
- IS 50skills, Lagaviti
- LT Evergrowth, WhiteBridge.ai
- NO Boost.ai, Kindly
- SE Ebbot, Teneo AI

6b Vertical applications

Finished AI products built for the workflow, data and regulation of one specific sector. The mapping covers five sectors: health and pharmaceuticals, energy, manufacturing, engineering and construction, defense, security and space, and cultural and creative industries.

CUSTOMER CONTRACTS FOR

End-user product or SaaS subscription

FULLY NEW NORDIC AND MATURE COMPANIES

- DK Ento, Utiligize
- EE Alpha3D, Bisly, CybExer Technologies, DefSecIntel Solutions, Marduk Technologies, R8 Technologies
- FI Aiforia Technologies, Avaintec, Capalo AI, Diktamen, Gosta Labs, Intergrid, Klinik.AI, Kuva Space (ALSO AT L3)
- IS DTE, PLAIO, Sidekick Health, Varist
- LT Fleming, Repsense
- NO Findable, Heimdall Power, Medbric, Noteless
- SE Arkion, Boneprox, Eliq, NODA Intelligent Systems, Tandem Health

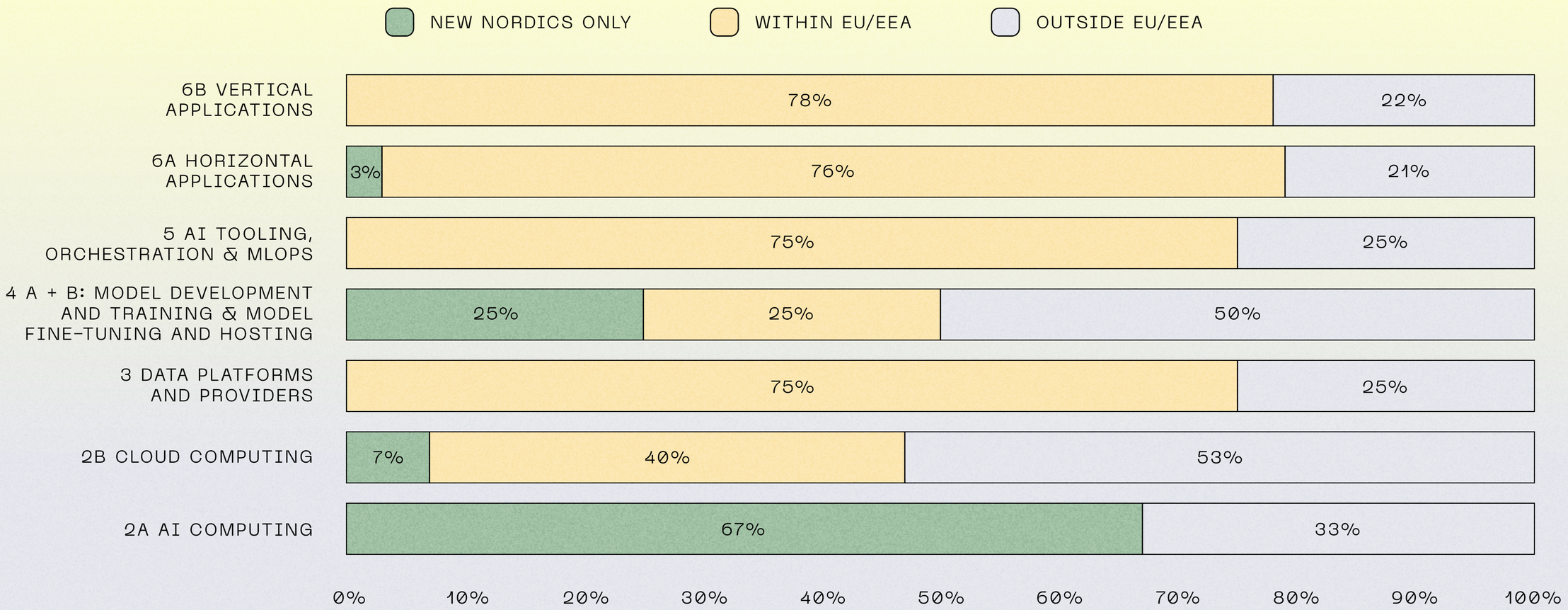
7 Services OUT OF SCOPE

AI integration services, consulting and training delivered around the stack, including pure resellers and managed service providers

CUSTOMER CONTRACTS FOR

Service agreements

Data location by layer



Appendix: About the study

The study was conducted by defining the AI full stack layers and collecting company data and placing each company on a full stack layer. As part of building the company dataset, each company's ties to the New Nordic countries and its maturity as a provider operating at full commercial scale were assessed, resulting in the full dataset this study is built on.

AI full stack layers

In this study, the AI full stack was divided into **eight layers, L0–L7:**

— **L0 Base dependency** covers general infrastructure like power generation and distribution, telecom and fiber, as well as semiconductor chips designed for AI and cloud computing. L0 was left outside the scope and was not included in the data collection or the analysis.

— **L1 Data center infrastructure** covers physical capacity inside a data center: space, power, cooling and connectivity.

— **L2 AI and cloud computing** covers two kinds of computing capacity. AI computing (L2a) is rented specialized capacity such as GPUs, contracted as dedicated hardware, reserved clusters or node-hours. Cloud computing (L2b) is general-purpose platform capacity for compute, storage and networking, contracted on consumption.

— **L3 Data platforms and providers** cover services for storing, organizing and preparing data, and companies supplying data itself, such as training datasets or synthetic data.

— **L4 Foundation models** are divided into two. Model development and training (L4a) covers models built from scratch, including pretraining on large datasets. Model fine-tuning and hosting (L4b) covers adapted versions of existing models, hosted and served ready for use

— **L5 AI tooling, orchestration and MLOps** cover tools and platforms for managing and monitoring models in production and for connecting a foundation model to a finished product.

— **L6 Applications** cover finished AI products a customer can buy and use as they are. *Horizontal applications* (L6a) are products usable across industries, such as customer service agents, enterprise search and knowledge assistants, document generation, app and website builders, and sales automation. *Vertical applications* (L6b) are products built for the workflow, data and regulation of one sector. Within L6b the study focuses on **five sectors:** health and pharmaceuticals; energy; manufacturing, engineering and construction; defense,

security and space; and cultural and creative industries. All five are among the sectoral flagships of the EU Apply AI Strategy, and they attracted the most venture capital funding among European AI companies between 2020 and 2025 (EU, 2026. Start-ups driving Europe's AI transformation).

— **L7 Services** covers AI integration, consulting and training, as well as resellers and managed service providers. L7 was left outside the scope, as service providers do not supply the AI capability itself but help customers adopt what is supplied on the layers below.

Criteria for a New Nordic company

To identify the New Nordic companies, three attributes were used in the determination: the location of the **registered head office**, the ownership base and the **country of jurisdiction.** Headquarters location is considered as New Nordic if the company's registered head office is within the eight New Nordic countries. In terms of **ownership base**, a company is considered New Nordic if more than **50%** of voting rights are held by owners domiciled in those eight countries. For jurisdiction, a company is considered New Nordic if the entity signing the customer contract is incorporated in one of the eight countries and no foreign parent can compel access to customer data. A company was considered **Fully New Nordic** if it meets all three criteria, and **Partly New Nordic** if it passes on one or two of them.

Additional attributes: data location and open model vs. proprietary API

Two further attributes were collected: whether customer data, including data handled by subprocessors, is stored and processed within the eight New Nordic countries, and whether a company relies on open-source models or proprietary model APIs.

Data location refers to where customer data is stored and processed. Data location is relevant to all other layers except L1, data center infrastructure, as what runs inside the facility is determined by the customer renting the capacity, not by the data center operator.

Open source versus proprietary refers to where the AI capability in a product comes from. A company may build and train its own model, use an openly available model, or access another company's closed model through an API. This attribute is relevant only for layers L4 and L6, where an AI model is the product itself or sits inside it. On the other layers, the company supplies capacity, data or tooling.

Neither of these two attributes is part of the New Nordic criteria, but both are reported as supporting information alongside the New Nordic grade. The reasoning behind this is that neither data location nor the choice between open and proprietary models is consistently disclosed in public sources, and therefore neither is available for a large share of the companies.

Dataset coverage and collection

The dataset covers **249 companies** with ties to the New Nordic countries. Partly New Nordic companies that do not meet the maturity criteria were not included. The sample is

broad but not comprehensive: alongside the companies identified in it, other AI companies with ties to the New Nordics may exist. The dataset covers all AI full stack layers within the scope of the study (L1 to L6) and all eight New Nordic countries.

Maturity assessment of the companies

Maturity was assessed through three data points: whether the company has a **ready product** that is purchasable today and not in a piloting or development phase, whether a customer can **sign an agreement directly with the provider**, and whether the company **passes the maturity threshold** set for its full stack layer. A company was considered **mature** only if it meets all three criteria, and evolving if it does not meet one or more of them.

The layer-specific thresholds set a minimum scale a company must reach on its own layer. They are expressed in the measure that indicates commercial scale on that layer. The layer-specific thresholds are:

- **L1 Data center infrastructure:** ≥10 MW of total power capacity, or ≥5,000 sqm of data center white space, or revenue ≥10 MEUR
- **L2a AI computing:** ≥1,000 GPUs or CPUs in production
- **L2b Cloud computing:** operates its own data center or cloud region in production, and revenue ≥5 MEUR
- **L3 Data platforms and providers:** revenue ≥2 MEUR, or ≥3 paying enterprise customers
- **L4a Model development and training:** ≥1 released model, and documented production use by ≥3 independent third parties
- **L4b Model fine-tuning and hosting:** revenue ≥2 MEUR, or ≥3 paying enterprise customers
- **L5 AI tooling, orchestration and MLOps:** revenue ≥2 MEUR, or ≥10 paying enterprise customers in commercial use
- **L6a Horizontal applications:** revenue ≥2 MEUR, or ≥10 paying enterprise customers in commercial use
- **L6b Vertical applications:** revenue ≥2 MEUR, or ≥10 paying enterprise customers in commercial use

On the application layers, a company with more than one public sector customer and reported revenue was considered to meet the customer threshold.

Ready dataset

The study was built on the ready dataset of 249 identified New Nordic companies. The number of Fully New Nordic and mature companies by layer is shown in the table alongside the main text.

Credits

New Nordics AI full-stack mapping. Project lead: AI Finland. Research and text: August Associates. Data verification: Dragonfly.

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