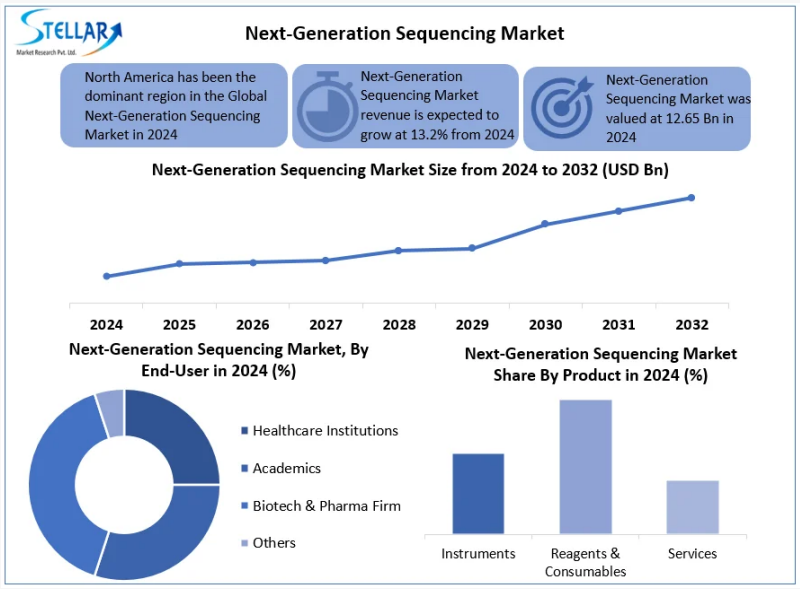
Next-Generation Sequencing Market, Size, Share, Growth Factors, Trends, and Forecast 2025-2032

Next-Generation Sequencing Market Size was valued at USD 12.65 Bn in 2024 and is expected to reach USD 34.11 Bn by 2032, at a CAGR of 13.2% forecast period.



Next-Generation Sequencing Market

SAN DIEGO, CA, UNITED STATES, June 12, 2025 /EINPresswire.com/ -- Stellar Market Research provides a CAGR of 13.2% for the worldNext-Generation Sequencing Market (NGS) from 2025–2032. In 2024, the Next-Generation Sequencing Market was worth USD 12.65 billion and will likely reach USD 34.11 billion by 2032. The Next-Generation Sequencing (NGS) market grows because of less cost to get good results from the tests, more need for tests to find the right way to treat illness, use in clinics, study of how cancer grows and spreads, funding from the government, new ways to do tests, new uses for tests, and more work to make tests easier to do and new ideas to make new tests.

> Next-Gene Sequencing is decoding life, enabling breakthroughs in medicine, diagnostics, and beyond.”
>
> *Dharati Raut*

Next-Generation Sequencing Market Overview

The Next-Generation Sequencing (NGS) market is experiencing heavy growth, which is made big by the rise of long-term diseases, the broader use of NGS for research and care, and the constant change in this field. There are many reasons for this, like the growth of bioinformatics and ways to store genomic data, the effect of the plans of many governments to do genome sequencing, and the growth in the money spent by drug makers for R and D. One big trend is the last new way to do sequencing, like PacBio SMRT sequencing, which gives you the chance to get long reads for a lot of DNA pieces, usually hundreds of thousands of bases long. Oxford

Nanopore sequencing, which uses a way to read the DNA as it is in a small hole or nanopore, is helping this market growth as it surpasses the limits of the old ways of doing sequencing.

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Next-Generation Sequencing Market Dynamics

Drivers

Clinical Adoption and Regulatory Approvals

Next-Generation Sequencing (NGS) has been used more in health labs. This is true for tests that find out what is not right in the body, things in the body that are not good for us, and tests that detect what is incorrect with a person. The groups that give rules for what can be used in health labs are helping to make this happen. They do this by approving that labs use the tests or by giving rules that say what labs can do. One big thing that happened was that a company called BillionToOne used a test they made. They also made a test that tells us about the body in a way that is more accurate. Another major development involved Thermo Fisher, which received regulatory approval for a sequencing machine they developed.

Rise of Direct-to-Consumer (DTC) Genomic Testing

The DTC (direct-to-consumer) gen testing is hot, and it looks like it will stay that way. People want to know about their family roots and how to stay safe in their health. 23andMe and AncestryDNA are the two biggest names in the field. They make tests that are not hard to get and use. But there are still problems. 23andMe went bankrupt in 2025 because of lawsuits about taking care of the data they had collected. AncestryDNA was busy in 2024. They grew their work and added more things. Though some worry about rules, more people want to learn about their health, and that is how the market gets bigger and new ideas come forward.

Technological Advancements

Technological advances in NGS include fast and top-of-the-line platforms, like the Illumina NovaSeq X and Oxford Nanopore's PromethION 2, which make NGS faster and more accurate. AI, the use of computers with ways to learn from data, and the use of clouds to store data, make it easier to look at the data. Some tools, like Genes2Me's EZY-AutoPrep, can do what Formulatrix's tools for handling liquids can do. These new tools are helping to make NGS find its way in both the lab and the clinic. This is helping to make NGS faster and to make NGS into a field that can grow and be used in many ways.

Government & Private Sector Funding

The government's programs, like NIH's All of Us and the UK's Genomics England, push for gene work even as cuts are made to funding. Last year saw new moves like looking at young kids for genome scans and using AI for cancer gene work. Government and private work is coming together with new companies like Revvity working with Genomics England and BioNTech, funding the UK. They work to help find problems faster, give each person a way to get the right care, and put gene work into use in big ways all over the world.

Restrain

Technical Complexity

Next-generation sequencing faces many hard-to-do tasks, as there are many steps involved. These steps are sample preparation, library making and writing, and data analysis. All of these need people who know how to do them. In health settings, there are no people who know how to write data. Each kind of machine or way of doing things gets different results. This means the same test is not done the same way each time. This means that the data collected by the tests may not be the same each time. Things like fixing how the work is done and how the tests are done have been made. This is to help make NGS easy to do, to get the same results each time, and to make sure the results are right.

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Innovations and Developments

Technological innovation is a key factor propelling the Next-Generation Sequencing Market forward. Notable advancements include:

Illumina's 2024 Oncology Expansion: In 2024, Illumina made NovaSeq kits for cancer studies. One is called TruSight Oncology 500 HT, and it works on tissue tests that need to be done in larger groups. The other is called ctDNA v2, and it works on blood tests that do not use a needle. These tests find the signs that a person has cancer. They work fast and are easy to do. They help find the signs in many people without the need to cut into a body part. This helps to study cancer and find new ways to treat cancer.

Revvity–Genomics England Alliance: In 2025, Revvity and Genomics England worked to help with the new study. It wants to get the first 100,000 baby genomes. The work looks at many odd diseases. It can help find these at the start. That way, people can get help when they need it. The work looks at genomes that are new.

Next-Generation Sequencing Market Segmentation

By Technology

By Technology, the Trade Management Market is further segmented into Whole Genome Sequencing, Targeted Sequencing & Re-sequencing, Whole Exome Sequencing, RNA Sequencing, De Novo Sequencing, and Other. Among which Targeted Sequencing & Re-sequencing dominates the NGS market by technology due to its high clinical utility and cost-efficiency. It enables precise detection of mutations like BRCA1/BRCA2 and KRAS, with over 60% of clinical NGS tests using targeted panels. Its adoption is widespread in oncology, rare disease diagnostics, and pharmacogenomics, offering faster analysis and higher sensitivity than broader methods like whole-genome or exome sequencing.

Next-Generation Sequencing Market Regional Analysis

North America: North America is the biggest place for NGS. It has to do with how much it is used in clinics. Big names like Illumina and Thermo Fisher are from there. In 2024, Illumina made new kits to test for cancer. The All of Us project from NIH keeps on making new tests. Rules to help keep tests safe, how many tests are done, and how much money is spent to make new tests keep North America on top.

Europe: Europe ranks second in the NGS market because of the big help from the governments, like the UK's £175 million Genome UK plan. In 2025, Revvity worked with Genomics England on a plan to find out what 100,000 babies are made of. Taken everywhere in the UK, Germany, and France, NSG is used a lot in cancer detection and in finding out what makes rare diseases work, and what makes the growth.

Asia-Pacific: Asia-Pacific is third in the NGS market. China has a 100M genome plan. India has the Genome India Project. In 2024, BGI made NGS tools fast and used in many labs in Asia.

Next-Generation Sequencing Market Competitive Landscape

The global and regional players in the Next-Generation Sequencing Market concentrate on developing and enhancing their capabilities, resulting in fierce competition. Notable players include:

Illumina, Inc. (San Diego, California, USA)
Thermo Fisher Scientific Inc. (Waltham, Massachusetts, USA)
Pacific Biosciences of California, Inc. (PacBio) (Menlo Park, California, USA)
Agilent Technologies, Inc. (Santa Clara, California, USA)
PerkinElmer Inc. (Waltham, Massachusetts, USA)
Bio-Rad Laboratories, Inc. (Hercules, California, USA)
Danaher Corporation (Washington, D.C., USA)
10x Genomics, Inc. (Pleasanton, California, USA)
GeneDx (Stamford, Connecticut, USA)
Illumina, Inc. (San Diego, California, USA

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